U. S. NAVAL AIR ENGINEERING CENTER

LAKEHURST, NEW JERSEY

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INTERIM REPORT
FLEET/TYCOM LEVEL SURVEY OF
ARMAMENT HANDLING EQUIPMENT PROBLEMS
TASK ONE
NAVAL AVIATION ARMAMENT SUPPORT
EQUIPMENT PROGRAM MANAGEMENT STUDY

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20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

This report summarizes the findings of a fleet-wide survey of USN aviation ships and shore activities and investigates problems with aviation Armament Handling Equipment. The problem areas surveyed included: fleet level management, allowance documentation, equipment maintenance, and inventory reporting methodology. The report presents a thorough discussion of pertinent findings along with comments and recommendations.

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I. SUMMARY

A. INTRODUCTION. Under the direction of NAVAIRSYSCOM (AIR-534), NAEC/GSED conducted a survey of selected US Navy aviation ships and shore activities directed towards identifying and solving problems with Armanent Handling Equipment. This survey report concludes that changes to current policies regarding fleet level management, allowance documents, maintenance, and inventory control of all categories of explosive handling devices are necessary within the aviation community. The following paragraphs summarize these problem areas.

B. FLEET LEVEL MANAGEMENT of AHE

1. The initial section of the report presents a general discussion of Armament Handling Equipment (AHE) problems. Fleet level management over all types of Weapons Handling Equipment (WHE) is overly complicated because each type of equipment has not been adequately identified or defined for fleet personnel. Also, the Naval Air Maintenance Program (NAMP), delineated in OPNAVINST 4790.2A, does not include AHE within the definition of GSE. These omissions hinder procurement and maintenance responsibility assignment. The overall problem is further aggravated because NAVAIR, NAVSEA, NAVSUP, and NAVFAC possess WHE under their cognizance, and each Systems Command employs a different management system based on their own management philosophy. Major disparities include allowancing methodology, maintenance documentation, inventory reporting, and the marked differences between Aviation 3-M and Shipboard 3-M. Weapons Departments contend that they are not aviation 3-M reporting activities although they are performing O- or I-level maintenance for some end-items of AHE. On the other hand, AIMD's consider only that AHE which is mechanically complex and comes in direct support of the aircraft to be eligible for GSE maintenance support.

2. It is concluded that Systems Command oriented fleet-level management approaches have been grossly ineffective within the aviation community. This report recommends that the present policy of fleet level management based on Systems Command cognizance be entirely replaced with a new system which manages all WHE by equipment description and function, irrespective of cognizance. This system is called "Functional Description" fleet level management, wherein specific categories of Armament/Weapons GSE and Weapons/Logistics Support Equipment are defined. The proposed management system is developed in detail within subsequent sections of this report.

C. WHE ALLOWANCES

1. It was determined that the AMMRL Program is not responsive to AHE allowancing requirements because most equipment cannot be correlated against aircraft. There are an inordinate number of IMRL tailoring actions due to the differences in AHE required for CVs having IRRP capability or larger magazine capacities as compared to CVs not so equipped. The ADMRL presently has no provision for supporting Naval shore activities which do not have aircraft. Moreover, the ADMRL does

not serve the growing inventory of NAVAIR beams, carriers, and strongbacks used for air-launched missile handling and assembly. This AHE is being listed in the Allowance Equipage List (AEL) of the COSAL, thus being ineligible for maintenance support from the AIMD. Although perhaps unintended, this AHE is not considered as GSE and is being treated as ship's installed equipment which requires little or no periodic maintenance beyond that provided by the supporting shipyard. Because of reported AHE shortages at many shore activities, NAVSEA acted to expand WHE allowances provided via NAVSEA 10490.X (series) Instructions to include many normally IMRL listed end-items of AHE. This NAVSEA Instruction also inputs the AEL of the COSAL, but is considered an IMRL-like document by fleet Weapons Department personnel. As a result, duplication and shortages exist concurrently, and Weapons Departments must utilize as many as five different allowancing documents in order to cover all their required WHE. The process of understanding, maintaining, and managing all these allowance lists remains a monumental task.

2. It is therefore concluded that the Weapons Department cannot operate efficiently with a multitude of allowance documents which cover similar equipment. This survey recommends the development of new ADMRL Application Data which will compute AHE allowances on weapons held as well as aircraft assigned. This will facilitate establishment of a Consolidated Ordnance Requirements Allowance List (CORAL) for all WHE used and maintained exclusively by the Weapons Department for ordnance evolutions regardless of Systems Command cognizance. The CORAL will be compatible with the AMMRL Program and managed by NAVAIR.

D. MAINTENANCE MANAGEMENT of AHE

1. Specific responsibilities for WHE maintenance are not contained within any known document nor does OPNAVINST 4790.2A (NAMP) assign maintenance responsibility over AHE. As a result, AHE maintenance is often managed in accordance with the discretion of the individual command, a situation which causes many inconsistancies between one fleet activity and another. The Weapons Department functions as an O-level user of AHE and performs this level maintenance without Aviation 3-M reporting. The AIMD performs I-level maintenance on GSE within the 710/900 WC, however, only the more complex AHE is maintained. Maintenance of ship's installed equipment is frequently split between the Engineering and Weapons Departments. An attempt by the Chief of Naval Operations (OP-592) to clarify the maintenance responsibility between AIMD and the Engineering Department aboard CVs was apparently inadequate due to the lack of definitive WHE descriptions and the absence of supporting maintenance documentation.

2. Associated maintenance problems concern the accomplishment of periodic load testing of portable ordnance handling equipment and fulfilling other aviation ordnance safety requirements. There is no document which addresses the inspection, load-testing, and certification of NAVAIR beams, carriers, and other portable AHE. As a result, such required testing is either not accomplished or, in some cases, only partially satisfied by the supporting shipyard or NARF at considerable

expense to the CV. In contrast, designated testing facilities located at NWS Concord and Earle will test all NAVSEA equipment at no cost to the requesting activity.

3. In conclusion, there are deficiencies in the areas of WHE maintenance and aviation ordnance safety publications. It is therefore recommended that Chapter 14 of the NAMP be ammended to include the AIMD's specific responsibilities over AHE, and that a new publication, called the Naval Airborne Weapons Maintenance Program (NAWMP), be written to include all information pertaining to Air Weapons Department operations. Further, NAVAIR should sponsor a viable load testing program similar to that presently supported by NAVSEA.

E. INVENTORY MANAGEMENT, CONTROL, and MATERIAL SUPPORT of AHE

1. The last section of the report discusses problems with the consolidated in-use inventory reporting, spare parts procurement for AHE end-items, and initial ship's outfitting allowances and redistribution of AHE. In general, inventory reporting of AHE is similar to that required for other GSE; however, most data is less than 50% accurate. Inasmuch as inventory reporting is the responsibility of the reporting custodian, conflicts in maintenance responsibility, lack of positive coordination between the AIMD and the Weapons Department, and other operational problems impact adversely on the quality of the inventory data. Further, many AHE end-items and NAVSEA equipment require no inventory whatsoever. Many AHE end-items furnished to NAVSEA activities for use with non-aviation weapons are not being reported via the in-use asset inventory report. Spare parts requisitioned by the non-aviation user precipitate a depletion of spares on the aviation community. Further, the exchange of NAVAIR and NAVSEA equipment has caused considerable confusion with providing initial outfitting allowances in support of CV SHIPALTs or newly constructed CVNs. Neither the TYCOM nor the shipyard are able to distinguish between NAVAIR and NAVSEA furnished portable ordnance handling equipment because WHE outfitting responsibilities are divided. Similar problems affect the redistribution of AHE between one TYCOM and another. Since Fleet controlled material is not reported via in-use asset reporting, items held in surplus at one TYCOM cannot be used to alleviate shortages occurring at another.

2. In conclusion, inconsistancies in determining which type of equipment requires inventory reporting and which does not, inhibit meeting overall policy objectives. Therefore, it is recommended that all WHE used by the Weapons Department should be allowed to the activity and inventoried under one system. This may be accomplished under the proposed Functional Description fleet management system described in detail within this report.

II. PREFACE

A. The Naval Aviation Armament Support Equipment Program Management Study was initiated by the Commander, Naval Air Systems Command (AIR-534), in May 1976, as a necessary response to the many questions raised during the Armament Handling Equipment (AHE) Conference held in February 1976. Fleet representatives at the conference disclosed dissatisfaction with AHE management, citing widespread difficulties and confusion with AHE acquisition, use, and maintenance support. It was subsequently decided that permanent solutions would be the only remedy and that an in-depth study and Fleet-wide survey be made. The purpose of the study and survey was to research these problems in depth so that every facet of the situation would be known prior to implementing major modifications to the acquisition or life-cycle management process.

B. This interim report is primarily directed towards solving AHE problems occurring at the Fleet level. AHE is a category of equipment comprising the major part of a broader community of aviation support equipment known as Armament Support Equipment (ASE). This report will later be ammended to include problems with armament packaging equipment and tools.

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V. INTRODUCTION

A. The objective of the Naval Aviation Armament Support Equipment Program Management Study is to provide an outline of a structured corrective action program aimed at both short range and long term improvements in the acquisition, use, and life-cycle management of AHE. The objective of this report is to devise an improved fleet management system which should solve surveyed problem areas. The basic study was to be conducted in two separate tasks: Task No. 1 involved a survey of selected fleet aviation activities to identify problems at the Fleet/TYCOM level; Task No. 2 of the study was to be directed at determining problems at the NAVMAT Field/Systems Command levels. The results of both of these tasks will be compiled into a final report.

B. This interim report covers Task No. 1, the Fleet/TYCOM level survey. Appendix A contains a list of Naval and Marine Corps activities visited. In order to conduct the survey, a questionnaire was developed for exclusive use by the survey team as an informal guide. The areas investigated included: fleet level management, allowances, rearming/ training, supply support, configuration control, storage/stowage facilities, and documentation/technical publications.

C. Appendix B contains a copy of the questionnaire used by the survey team. This report was designed so as to present a "systems approach" towards problem identification and resolution, wherein one management function affects the other within a systemic framework as illustrated in Figure 1. This approach is consistant in meeting the objectives of the Naval Aviation Armament Support Equipment Program Management Study.

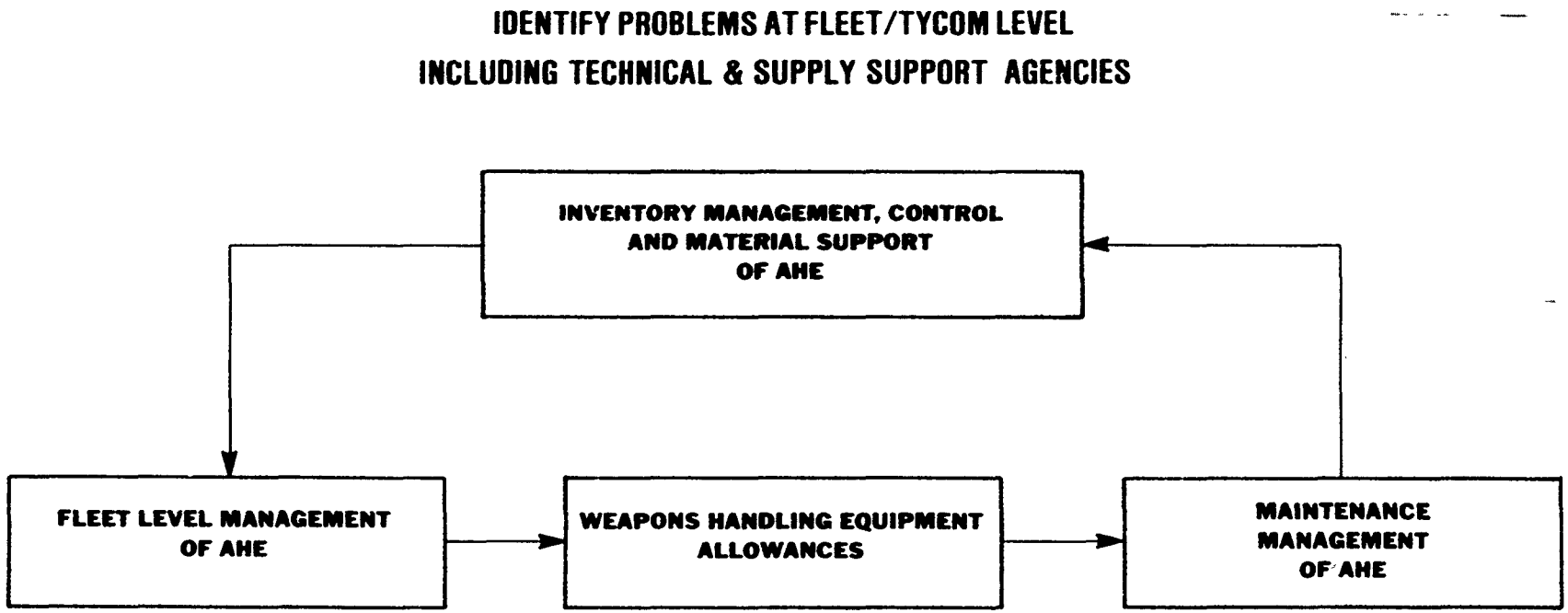

FIGURE 1. A "SYSTEMS APPROACH"

VI. FLEET/TYCOM SURVEY REPORT

A. FLEET LEVEL MANAGEMENT OF AHE

1. Lack of Uniformity of Management Processes Involving WHE

a. Overview

(1) The terms, Ordnance Handling Equipment (OHE), Weapons Handling Equipment (WHE), and Armament Handling Equipment (AHE) are often used synonymously by fleet personnel because they pertain to similar types of equipment. This should be no surprise since OHE, WHE, and AHE have respectively evolved from the BUORD, BUWEPS, and NAVAIR organizations over the years.

(2) When used within the context of this report, the abbreviations AHE, OHE, MHE, and OHV shall pertain to the equipment coming under the command cognizance of NAVAIR, NAVSEA, NAVSUP, and NAVFAC, respectively. The abbreviation WHE shall encompass all the equipment used throughout the Navy for handling and transporting explosive ordnance, irrespective of command cognizance.

(3) The relationship of all of these abbreviations and acronyms to signify equipment types for each cognizant "hardware" System Command is illustrated in Figure 2. Their complete understanding is considered essential for comprehending this report. (See sections X and XI for precise definitions of all abbreviations.)

b. Findings

(1) Specific types of WHE coming under the various hardware Systems Commands have not been defined within any known document for use by fleet personnel. This situation hinders the process of assigning responsibility over the equipment.

(2) Each hardware Systems Command employs a different method of managing the WHE under its cognizance, a situation which causes conflict and misunderstanding throughout the Fleet.

(3) The Naval Aviation Maintenance Program (NAMP), delineated within OPNAVINST 4790.2A, does not define AHE as being Ground Support Equipment (GSE); thus many AHE end-items are not being maintained by the Aviation Intermediate Maintenance Department (AIMD).

(4) Not all AHE actually comes under the management control of the NAVAIR GSE Program Manager (AIR-534), nor is all such AHE considered to be GSE by fleet operating personnel.

(5) There exists widespread confusion over such basic management directives as determining applicable cognizant agencies, allowancing documents, maintenance plans, inventories, etc.

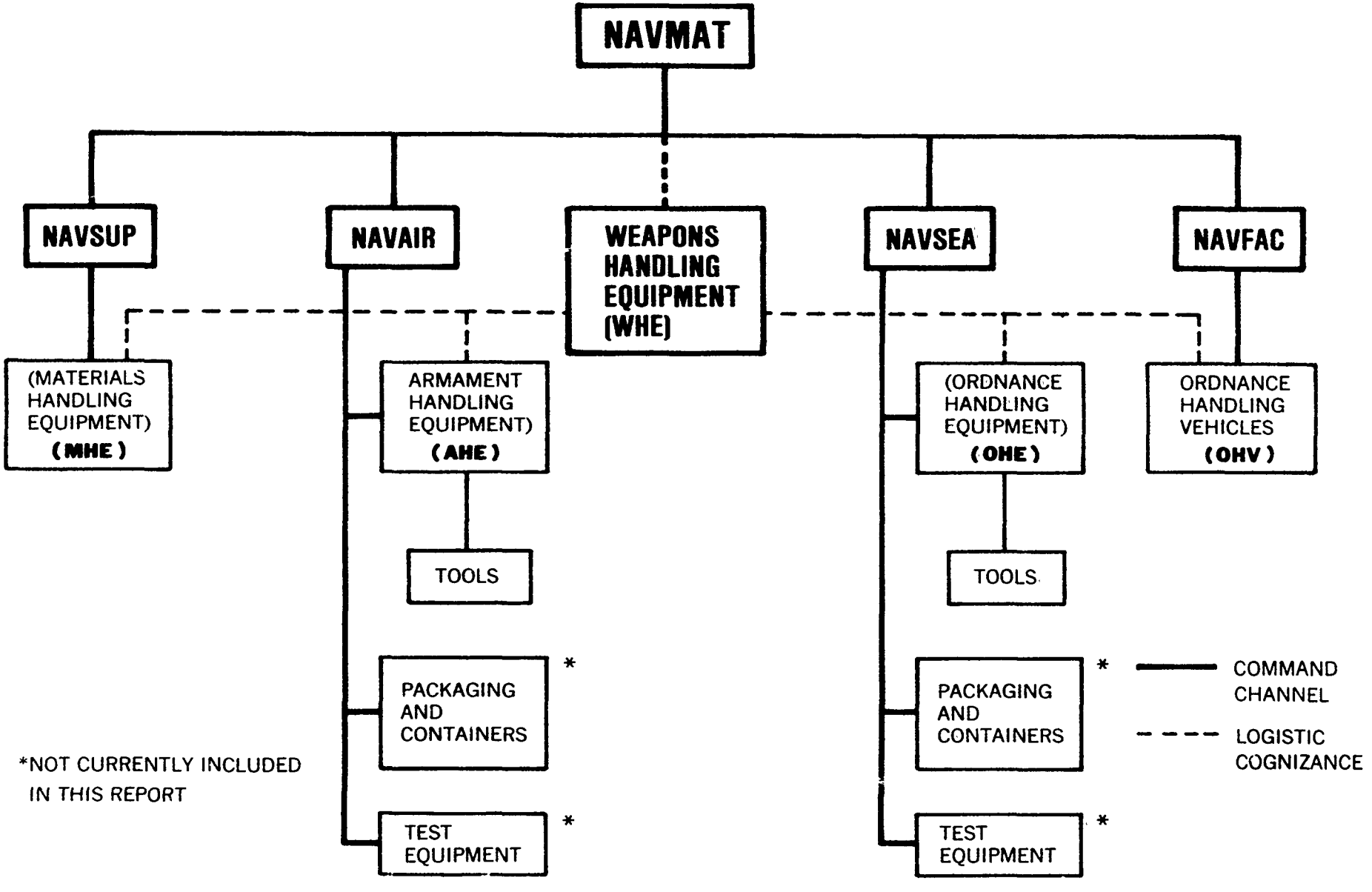

FIGURE 2. USN ARMANENT/WEAPONS SUPPORT EQUIPMENT ARMAMENT/WEAPONS SUPPORT EQUIPMENT

c. Discussion

(1) No Uniform System

(a) The fleet survey revealed the absence of a uniform management system over all types of Weapons Handling Equipment (WHE). Clear and concise definitions of commonly used terms such as Armament Handling Equipment (AHE), Ordnance Handling Equipment (OHE), and Weapons Handling Equipment (WHE) are unavailable. Each cognizant Systems Command exercises a different method of allowancing, maintenance documentation, and inventory reporting. OPNAVINST 4790.2A, Volume II, Chapter 2, Paragraph 217, Ground Support Equipment does not include Armament Handling Equipment within the definition of GSE; therefore maintenance of many such items are exempted from the GSE Work Center (900 WC) of the AIMD. Fleet reaction to these apparent deficiencies have resulted in widespread confusion and misunderstanding.

(b) Both shipboard and shore based Weapons Departments have reported a need to consolidate various basic management functions, particularly with NAVAIR and NAVSEA AHE/OHE that looks alike and performs similar functions. Major Systems Command managed functions such as allowance lists, maintenance documentation/performance, inventory control/ reporting, and safety inspection/certification vary between items of the same description and use. Often, these similar items are managed differently because they were supplied to the Fleet via different Systems Commands.

(c) It was evident at all activities visited that Weapons Departments must consult many different allowance lists, use two separate formats of Maintenance Requirement Cards (MRCs), and refer to a myriad of NAVSEA, NAVAIR, NAVFAC, and NAVSUP publications in order to carry out the administration of their explosive ordnance handling equipment. Aircraft carriers (CVs) are most severely affected due to the multiplicity of weapons serviced.

(2) Different Philosophies. Many problems can be attributed to the marked differences in management philosophies employed by each hardware Systems Command. NAVSEA's OHE is generally weapons oriented; NAVAIR's AHE is aircraft oriented; and NAVSUP's MHE and NAVFAC's OHV is primarily oriented towards general utilization, i.e. not dedicated to weapons handling operations. CNO places the responsibility for explosive ordnance safety with NAVSEA, yet the life-cycle management of most major explosive weapons systems is assigned to NAVAIR. The task of fleet operating personnel in understanding applicable regulations compounds the more difficult process of implementing these regulations for each category of their support equipment. As a result, noted differences in management processes have generated proportional differences in fleet operational procedures between one activity and another. (Specific differences will be discussed in detail within section VI, paragraph C, 2.)

(3) NAVMAT WHE. Fleet operating personnel reported that they are often confused over the basic matter of "command cognizance". Because of the existence of a combination of WHE retained both on a custody and sub-custody basis by the Weapons Department, little or no

distinction is made between one type of equipment and another. Activities which are unable to properly identify and classify their WHE will undoubtedly experience difficulty in obtaining training documents, securing maintenance support, conducting inventories, and procurring spare parts and/or new or replacement equipment.

(4) NAVAIR AHE. Both Weapons Department and AIMD personnel generally recognize that the majority of weapons skids, skid adapters, weapons loaders, bomb hoists, and other specialized AHE come under the command control and cognizance of NAVAIR. This is because all such equipment looks and performs as GSE. The NAVAIR GSE Program Manager (AIR-534) generally classifies this type equipment among a broader community of equipment called Armament Support Equipment. It is significant, however, that not all AHE is considered as GSE by fleet personnel nor does all this equipment come under the management control of the NAVAIR GSE Program Manager (AIR-534). (The equipment specifically referred to here are air-launched guided missile assemblies and maintenance equipment. The majority of these GSE end-items come under the acquisition management responsibility of the cognizant Project Manager-for-Air (PMA).

(5) NAVSEA OHE. There exists within the aviation community a significant quantity of Ordnance Handling Equipment (OHE) coming under the command cognizance of NAVSEA. Most of this OHE is required on board CVs for handling and transporting various Anti-Submarine Warfare (ASW) and Anti-Aircraft Warfare (AAW) weapons. Such weapons include airborne mines (MK 56-1), acoustic torpedoes (MK 44/46), and missiles like the Terrier BT (RIM-2D), Terrier HT (RIM-2F), and BPDMS/Sea Sparrow (RIM-7E5). Additional OHE is used for handling and decanning Shrike (AGM-45), and Sparrow (AIM-7E4) missiles and for transporting various Fleet Issue Unit Loads (FIULs). OHE is also employed at aviation shore activities, but not to as large an extent as aboard CVs.

(6) NAVAIR/NAVSEA Mix. Both NAVAIR and NAVSEA share command cognizance over many end-items of WHE which resemble one another and perform identical functions. Such equipment includes a heterogenious mixture of beams, carriers, slings, strongbacks, weapon assembly stands, dollies, cradles, gauge bars, and handling bands that are used within the magazine for servicing weapons. Weapons Departments do not distinguish such AHE and OHE with respect to NAVAIR or NAVSEA cognizance. (A representative list of all involved equipment is included within Appendix C.)

(7) Allowances. Magazine equipment is generally not allowed to using activities via the Individual Material Readiness list (IMRL). Consequently, redistribution and inventory control of this equipment by the Aircraft Controlling Custodians (ACCs), located at the TYCOMs (COMNAVAIRLANT/COMNAVAIRPAC), presents a deviation from normal operations. Problems often occur in locating and distributing OHE because inventory data is generally unavailable. The majority of involved AHE/OHE end-items are allowed the ship or activity against type weapons and are listed on the Allowance Equipage List (AEL) of the Consolidated Ships/Shorebased Allowance List (COSAL). Once the equipment is issued to the activity via the initial outfitting process, management is the sole responsibility of the Weapons Department as "user-custodian."

Therefore, functions such as maintenance, inventory, inspection, and certification are added to the work load of the Weapons Department. AIMDs will not assume responsibility for this equipment because it is not considered "aeronautical equipment" nor is it listed in the IMRL.

d. Conclusions

(1) As can be derived from the foregoing discussion, fleet level management is not being properly executed over many items of equipment. The reason is that each type/description of WHE has not been adequately or clearly defined for fleet personnel. It is axiomatic that equipment which cannot be defined cannot be managed. Therefore, before any comprehensive fleet level management program can be developed for all WHE, distinct definitions of equipment is considered essential (refer to section VII, A through F inclusive).

(2) In the final analysis, many problems occur because WHE includes a myriad of equipments coming under the cognizance of NAVAIR, NAVSEA, NAVSUP, and NAVFAC. Systems Command oriented fleet-level management approaches have not worked within the aviation community. Therefore, a new fleet level management system based on Functional Descriptions should be developed (refer to section VII, B through F inclusive for specific recommendations).

2. Weapons Department's True Responsibility Not Recognized

a. Overview

(1) Both the Weapons Department and the AIMD have the primary mission of providing material support to the embarked Air Wing. This mission responsibility is well recognized and expertly performed by ship/station personnel at all activities visited. Noted operating differences are often the result of the activities' desire to accomplish the job without strict adherence to uniform procedures.

(2) AIMD functions are governed by the NAMP as delineated within OPNAVINST 4790.2A. There is no comparable document to OPNAVINST 4790.2A which specifies the functional responsibilities of the Weapons Department. Problems are much more prevalent aboard CVs wherein the operational demands on the Weapons Department are much greater and where there exists no supporting Public Works Department (PWD). Consequently, most Weapons Departments have been conducting their maintenance activities in accordance with the in-house procedures established by the Commanding Officer of the activity. These procedures have endeavored to balance the work load between the AIMD, Weapons Department, and the Ship's Engineering Department, irrespective of absolute interpretation of the NAMP. The prerogative of an activity's Commanding Officer in assigning various responsibilities within his command is not questioned. However, with the advent of newer and more complex weapons support equipment, guidelines for assigning various responsibilities to the Weapons Department should be well documented in order to achieve standardization.

b. Findings

(1) Weapons Officers aboard CVs contend that others have a misunderstanding regarding the true mission and responsibilities of the Weapons Department.

(2) Specific maintenance responsibilities over WHE are not delineated within any known document.

(3) There are inconsistencies existing in various aviation ordnance safety precaution publications.

(4) Equipment maintenance responsibilities assigned to the Weapons Department varies from ship to ship and station to station.

c. Discussion

(1) Users Not Custodians. Weapons Departments are not designated Aviation 3-M reporting activities nor are they subject to the requirements of OPNAVINST 4790.2A. Weapons Departments are responsible for the receipt, stowage, custody, handling, assembly/checkout, and safety of all airborne weapons and ship's AAW/gunnery functions. In contrast, AIMDs are responsible for the maintenance of aircraft and related GSE at the I-level. Since Weapons Departments are users of GSE, they consider themselves not responsible for custody, maintenance, and inventory management of GSE assets. But, as users of GSE, operational inspection responsibilities are accepted in the same manner as squadron O-level maintenance. The foregoing may be accepted as true, but this is not how Weapons Departments operate. As previously discussed, the Weapons Department has "custodial" responsibility over may GSE items. Operational, maintenance, and other related instructions are not available within OPNAVINST 4790.2A or OPNAVINST 4790.4 (Shipboard 3-M).

(2) Aviation 3-M vs. Ship's 3-M. A contributing factor is the wide difference between Aviation 3-M and Shipboard 3-M. AIMDs operate in accordance with Aviation 3-M as delineated in OPNAVINST 4790.2A; Weapons Departments operate under surface 3-M per OPNAVINST 4790.4. It is inconsistant with established directives to require either the AIMD or the Weapons Department to operate concurrently under both aviation and surface 3-M maintenance systems unless efforts are made to render the two maintenance systems more compatible. Wide differences between Aviation and Surface 3-M, i.e. two types of MRCs, NAVAIR GSE in-use asset reporting methods/requirements, MHE reporting per Ships Parts Control Center (SPCC) Instructions, NAVSEA OR-99 Documents, delineation of specific maintenance responsibility at O-, I-, and D-levels, etc. for each type end-item of WHE is often confusing and misunderstood by most Weapons Department personnel.

(3) Weapons Mission. The principle mission of the Weapons Department is to support the embarked Air Wing with various weapons systems. Accordingly, aerial mines, torpedoes, missiles, nuclear weapons, and various gun ammunition are stored, inventoried, maintained, assembled/disassembled, and delivered to each individual squadron weapons

loading team in the embarked Air Wing. During ship's ammunition backloads/offloads, weapons are packaged for delivery to the Fast Combat Support Ship (AOE), Ammunition Ship (AE), or Naval Weapons Station (NWS), as required. As with the AIMD, the Weapons Department's work load varies in direct proportion to operational commitments experienced by the embarked Air Wing. The Weapons Department organization is shown in Figure 3.

(4) Equipment PMS

(a) All WHE under the custody or sub-custody of the Weapons Department receives PMS by Weapons Department personnel. Such PMS includes lubrication, pre-operational inspections, configuration assembly, and other routine maintenance functions per Shipboard 3-M. Corrective maintenance is performed on some items; however, the amount of equipment serviced and the extent to which corrective maintenance is performed varies from one activity to another.

(b) Maintenance Requirement Cards are used to perform PMS but, MRCs are not available for all equipment. NAVAIR format MRCs are available for most mobile CGSE/AHE, the exceptions being items of PGSE; i.e. Guided Missile Adapter, ADU-399/E; Adapter, Lift/Loading Weapon Skid, ADU-400/E, etc. No NAVAIR MRCs are available for NAVAIR beams, carriers, strongbacks, and slings; however, NAVSEA MRCs are available for similar equipment under NAVSEA cognizance. Maintenance reporting procedures are never used by the Weapons Department because they do not consider themselves to be a 3-M reporting activity under OPNAVINST 4790.2A. On board the USS Constellation (CV-64), shipboard equipment such as monorail hoists and bomb elevators were being maintained by the Weapons Department. This differs from the USS Kennedy (CV-67) where the ship's Engineering Department is responsible for all such maintenance. The Executive Officer of the USS Constellation detailed the required maintenance functions (electrical work excepted) to the Weapons Department because they are the principle users of the bomb elevators. (Since this procedure is apparently being practiced on several CVs, NAVAIRSYSCOM (AIR-537) is in the process of taking steps to provide training for AO personnel in making bomb elevator repair/maintenance part of the AO rating's qualification for advancement).

d. Conclusion. There is an obvious need for an operations manual for use by the Weapons Department. This manual should be similiar in content to OPNAVINST 4790.2A and should consolidate all major regulations relating to Weapons Department operations including ordnance safety, maintenance of support equipment, shipboard/shorebased operations, etc (refer to section VII, paragraphs Q, R, and S for recommendations).

3. Aviation Intermediate Maintenance Departments Do Not Manage AHE Like Other GSE

a. Overview. Chapter 14 of OPNAVINST 4790.2A states that the maintenance, inventory control, and reporting of GSE is to be an integral part of the task of maintaining aircraft and airborne weapons systems. Aeronautical Requirement GSE (AR-21C) defines GSE as "...all equipment required on the ground to make a system, support system, subsystem, or end-item of equipment (GSE for GSE) operational in its intended environment." This definition includes all AHE.

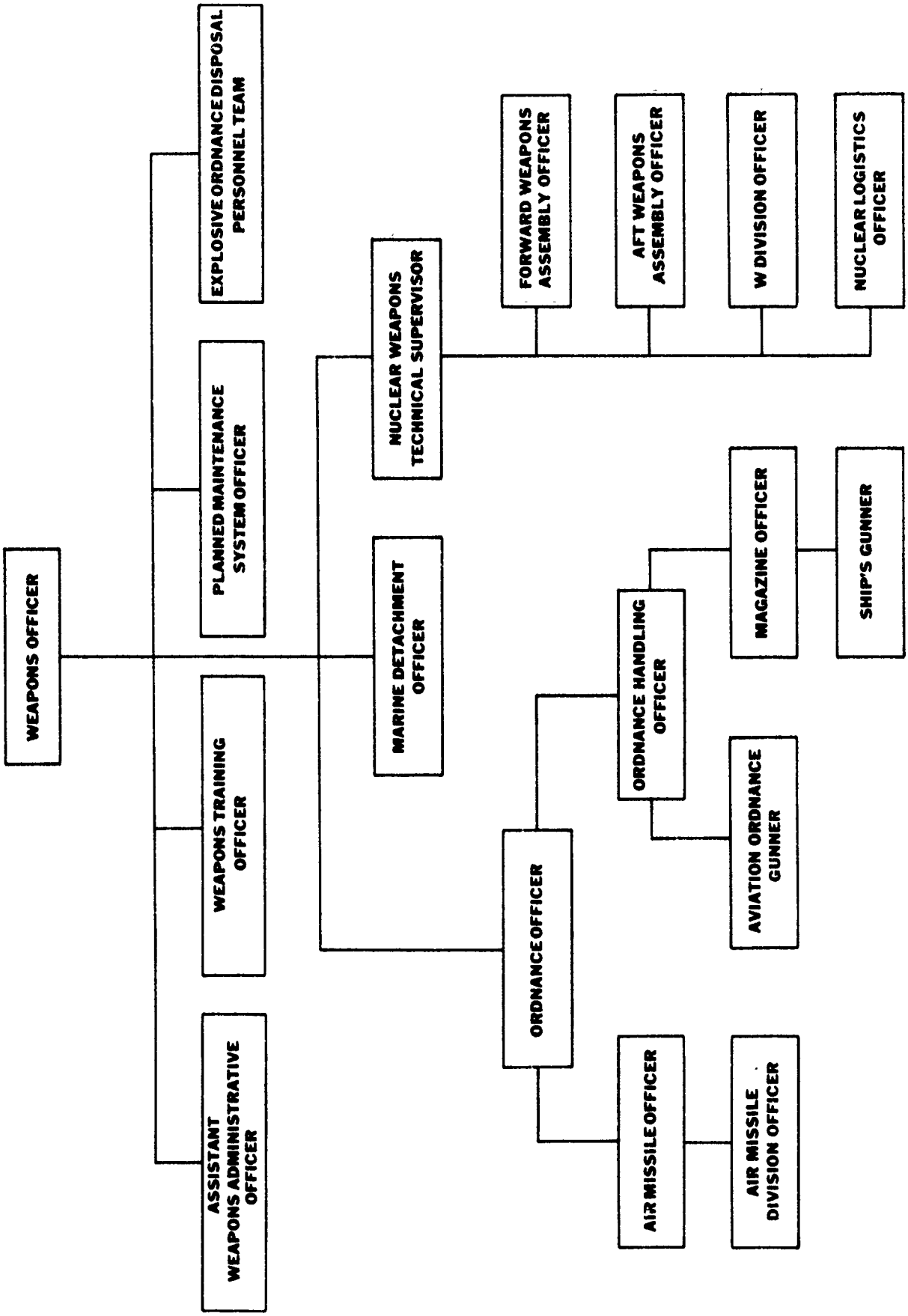

FIGURE 3. WEAPONS DEPARTMENT ORGANIZATION

b. Findings.

(1) AIMDs do not manage AHE like other GSE end-items although AHE is listed in the ADMRL.

(2) AIMDs do not maintain AHE like other GSE although MRCs, type equipment codes, and maintenance plans are available for most AHE.

c. Discussion.

(1) Equipment Maintained. At all AIMDs visited, it was evident that GSE Maintenance Division (900 WC) will assume maintenance responsibility over some, but not all, AHE end-items. As previously mentioned, only IMRL listed items are even considered. Items of AHE not listed on the IMRL are not managed. Some AHE, although listed in the IMRL, are not maintained because they lack mechanical complexity. This equipment includes such AHE as bomb skids, skid adapters, non-powered bomb hoists, etc. The general interpretation is that only that AHE which is mechanically complex (i.e. contains an internal combustion engine) and/or comes in direct support of the aircraft is managed and maintained by the AIMD. The AIMD Organization Chart is show in Figure 4.

(2) Equipment Not Maintained. Magazine equipment such as C-grabs, monorail hoists, weapons assembly beams and carriers, cable tie-downs, missile assembly equipment, bomb assembly tables, and all portable AHE/OHE is not maintained by the AIMD. All such are not normally listed in the IMRL, have no maintenance plans, type equipment codes, or NAVAIR MRCs, nor any other supporting technical documentation. The majority of this equipment was supplied to the CV during the initial ship's outfitting and is under NAVAIR/NAVSEA cognizance. Non-IMRL items are referred to in OPNAVINST 4790.2A as being covered by other Navy directives. However, these directives often represent a conglomeration of NAVSEA Instructions, ODs, OPs, etc. which are held by the Weapons and Engineering Departments.

d. Conclusion. Chapter 14 of OPNAVINST 4790.2A, Naval Air Maintenance Program, should be amended to include specific maintenance responsibilities over all categories of Armament/Weapons Support Equipment. Particular recommendations are delineated in section VII, paragraphs T and U.

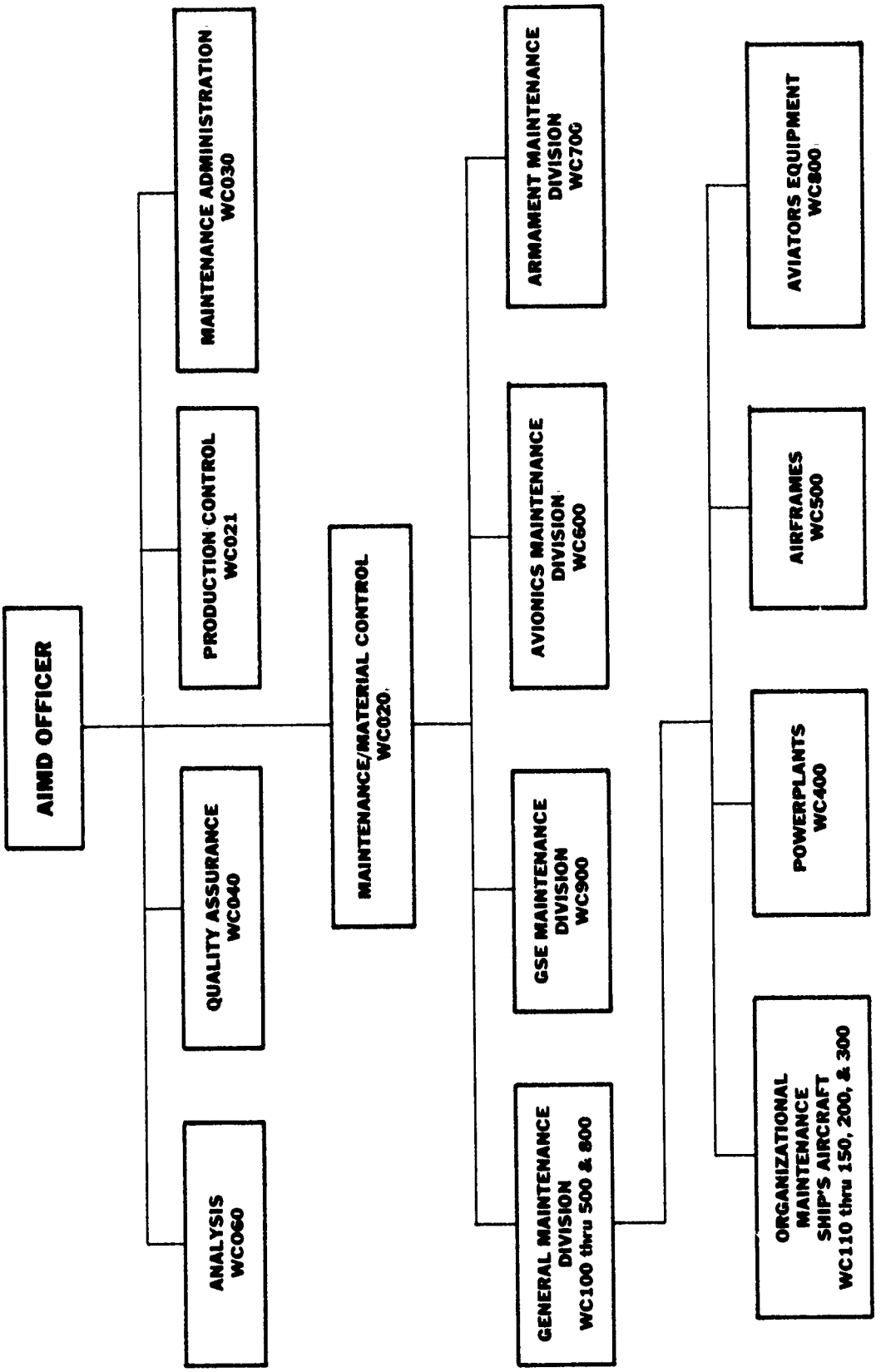

FIGURE 4. AVIATION INTERMEDIATE MAINTENANCE DEPT ORGANIZATION

B. WEAPONS HANDLING EQUIPMENT ALLOWANCES

1. AMMRL Program Not Completely Suitable to AHE Allowance Assignments

a. Overview

(1) The Application Data Material Readiness List (ADMRL) and the associated allowance document, the Individual Material Readiness List (IMRL), provides allowances of common and peculiar armament GSE based primarily on squadron needs. Recommended allowances are entered into the ADMRL Source Data via the Ground Support Equipment Requirements Data (GSERD) prepared by NAVAIR or the CFA. Allowances are indicated utilizing the standard 10-column spread which, in turn, authorizes allowances for GSE end-items against ranges/ types of aircraft supported. The IMRL specifies items and quantities of GSE required to support the material readiness of the aircraft maintenance functions of the AIMD as well as the squadron.

(2) AHE is listed in the ADMRL Source Data under the "OL" List Code denoting "armament", and is normally assigned a maintenance level (M/L) "O" (organizational) with a preposition code "P" (held at the AIMD for squadron use). This situation requires the supporting AIMD to provide sufficient AHE assets in order to support total squadron O-level maintenance requirements.

(3) Basically, AHE is treated in the same manner as other types of GSE. However, it is the ship's Weapons Department, not the AIMD or the squadrons, who are the principal users of most AHE. AHE does not function as aircraft maintenance equipment, nor is it used by the squadrons as other "O" and "P" prepositioned coded end-items of GSE. AHE may be compared to tow tractors and tow bars in that all such GSE items provide support to the squadron aircraft, when required, but are not directly related to aircraft maintenance functions nor are they used by squadron maintenance personnel.

(4) The conflicts existing between the assumed squadron/ AIMD relationships per the AMMRL program and those actually practiced throughout the Fleet have caused some confusion over "custodian" responsibilities. It appears that the ADMRL should be modified to provide a "custodial" assignment to the Weapons Department for some end-items, and "sub-custodial" assignment to others.

b. Findings

(1) Many items of AHE and OHE do not fit into the ADMRL's standard 10-column spread against aircraft assigned.

(2) Inflexibility of the ADMRL to properly allocate required quantities of AHE to the Weapons Department has precipitated excessive tailoring actions.

(3) Since ADMRL allowances for AHE are computed via the numbers of aircraft assigned, aviation shore activities having no aircraft are not properly served.

c. Discussion.

(1) Can't Fit The ADMRL. There is a significant community of AHE and OHE which cannot fit into the 10-column spread of the ADMRL against the aircraft assigned. A causal factor is that most of this equipment supports a weapon, not an aircraft, and the ADMRL source data currently does not permit correlating required AHE allowances against a particular weapon or combination of weapon types. Moreover, it is even difficult to correlate some GSE end-items to either weapon or aircraft, yet they are still classified as GSE. In addition, exclusive listing of AHE end-items within the Consolidated Ordnance Allowance List (COSAL) is believed improper because the items are GSE and are not considered an integral part of the ship or station. In actual practice, pratically all AHE is turned over to the Weapons Department on a sub-custody basis. Therefore, it is the Weapons Department, not the squadron who must assume the responsibility for inventory control, pre-operational checks, and calendar maintenance. (The degree to which Weapons Departments assume these responsibilities vary from activity to activity, and will be discussed in section VI, paragraph C, 2.)

(2) ADMRL Inflexibility. The previously described ADMRL/IMRL allowancing process is sometimes inflexible and ineffective as an AHE allowancing vehicle. This judgement is made because the available ADMRL source data tends to treat AHE in the same manner as other O- or I-levels of aircraft maintenance equipment. Maintenance and servicing GSE, are generally used by the squadron personnel and are returned to the AIMD for repair and unscheduled maintenance. AHE is normally used by the squadron only during weapons loading/unloading operations. When the squadron is finished with the AHE, it is returned to the Weapons Department, not the AIMD as with maintenance and servicing GSE. The aforementioned situation illustrates that the Weapons Department functions as the custodian of AHE to a greater degree than the AIMD. But the NAMP officially places the custodial and I-level maintenance responsibilities with the AIMD. It is concluded that the AMMRL Program and the NAMP tend to treat AHE like aircraft maintenance and servicing GSE, notwithstanding major differences as to who actually uses the AHE and the purposes for which it is used.

(3) Wheeled Tractor. A corollary problem concerns an effort to establish an O-level, preposition code "P" Shorebased Weapons Department allowance for the Wheeled Tractor, Aircraft GSE, A/S 32A-30, a newly developed item. During the Aircraft Handling Program Review Conference of July 1976, a total combined O- and I-level allowance for AIMD, squadron, and Weapons Department useage was recommended by those in attendance. Unfortunately, the O-level Weapons Department allowance could not be identified within the 10-column spread of the ADMRL. Although visits to several shore activities conducted in connection with this survey supported the desirability of this item, establishment of a general O-level allowance for all Weapons Departments was not possible because not all aviation shore activities were visited. Each shore activity possess certain individual physical characteristics which makes the establishment of generalized ADMRL O-level allowances impracticable for some end-items. All such allowances must be computed against each

and every activity rather than against weapons or aircraft supported. (Refer to section C, paragraph 2 for additional information on the Wheeled Tractor, Aircraft, A/S 32A-30).

(4) IMRL Tailoring Actions

(a) IMRL tailoring actions by the TYCOM's IMRL managers are the rule rather than the exception with respect to AHE allowancing procedures. Generally speaking, the tailoring of GSE end-items is often required due to the minor differences in an activity's operational requirements. However, when squadron allowances for AHE are entered into the ADMRL source data utilizing the standard 10-column spread, the computation of the supporting AIMD's required assets becomes a matter of conjecture. Thus, the total I-level requirement for the AIMD cannot be derived simply from adding the O-level allowances but must be tailored to meet the individual activity's needs.

(b) The most apparent situations affect the AHE allowances for CVs with different design capabilities, i.e. required allowances for the Bomb Skid, Aero 21 A/C (and its adapters) must be nearly doubled for all CVs equipped with Improved Rearming Rate Program (IRRP) capability over CVs not so equipped. Conversely, allowances for the Bomb Skid, Aero 12C (and its adapters) must be tailored downward by as much as 1/2 from the computed allowance. Such tailoring is considered unnecessary and should be programmed into the ADMRL/IMRL computer.

(5) COSAL Listed AHE. Another problem which affects the employment of the COSAL listed AHE allowances occurs for those activities which do not have any aircraft assigned to them or only have a few. Affected activities include NAWF Machrihanish and NAS Fallon which have weapons support missions. In some instances, allowances have been established via the COSAL for NAVAIR cognizant AHE in lieu of utilizing the special allocation provisions of the ADMRL. The reasons given for using the COSAL were reportedly due to the difficulties in computing special allowances for such activities. The disparity in equipment allowancing procedures has in many cases, precipitated shortages of required AHE. These AHE problems compound existing shortages with other weapons handling equipment which comes under the cognizance of NAVFAC, NAVSUP, and NAVSEA. The lack of ordnance handling vehicles, forklift trucks, and handlift trucks were specifically cited in other surveys reviewed during the preparation of this survey report.

d. Conclusion. It can be concluded that AHE allowances are affected to a greater degree with respect to ship's operations than by numbers and types of aircraft on board. Similarly, shore stations allowances of AHE are affected more by geographical location, mission capability, location of magazines, etc. than by the number or types of aircraft assigned to the station (refer to section VII, paragraphs G through J).

2. Incompatibility of some AHE to AMMRL Program Requires COSAL/AEL allowances for GSE.

a. Overview. As discussed in section VI, paragraph B, 1, many AHE end-items are not being served by the AMMRL Program. The reason for this was attributed to the situation that AHE allowances could not always be correlated against aircraft assigned. It appears that there was no plan to design into the AMMRL Program a capacity for calculating AHE allowances without resorting to tailoring actions. For many AHE end-items, the AEL of the COSAL becomes the allowance. This paragraph discusses some of the problems regarding the use of the AEL/COSAL including the prime reasons why the IMRL was not used.

b. Findings

(1) Weapons Department cannot identify all their WHE with an applicable allowance list, i.e. AEL/COSAL listed AHE end-items lack visability.

(2) Existence of duplicate COSAL/IMRL allowances for AHE often results in confusion.

(3) AIMD support, i.e. maintenance functions, inventory control, load testing, etc., will not be assumed by the AIMD for AEL/COSAL listed end-items.

(4) Many AHE end-items are allowed for aviation activities via the AEL/COSAL because GSERDs were not provided to the ICP soon enough to complete the provisioning process.

c. Discussion

(1) Lacks Visability. A typical situation among those activities visited was that Weapons Departments must consult five or more different allowance documents in order to identify their total allowance of WHE (see Figure 5). Authorized allowances of WHE contained within the AEL of the COSAL are generally unknown to Weapons Department personnel. Since TYCOMs (COMNAVAIRLANT/COMNAVAIRPAC) are unable to effectively manage this AEL/COSAL listed WHE, neither the IMRL Manager nor the Weapons Department user know the proper items or the quantities required. On board one of the CVs visited, the Weapons Handling Officer had addressed a letter to his TYCOM containing a list of 50 AHE end-items and tools both held and required by his department. His letter requested that all of these end-items be placed either in the IMRL or NAVSEAINST 10490.2. A subsequently performed check of the listed equipment revealed that all the items were under the cognizance of NAVAIR and were already allowed to the ship via the AEL/COSAL (refer to Appendix D).

(2) Duplicate Allowances. The fleet survey confirmed previously reported occurrences of duplicate allowances of WHE for aviation activities. This situation not only causes confusion over the administration of both COSAL and IMRL allowances, but also has an adverse impact on the distribution of available WHE assets throughout the Fleet.

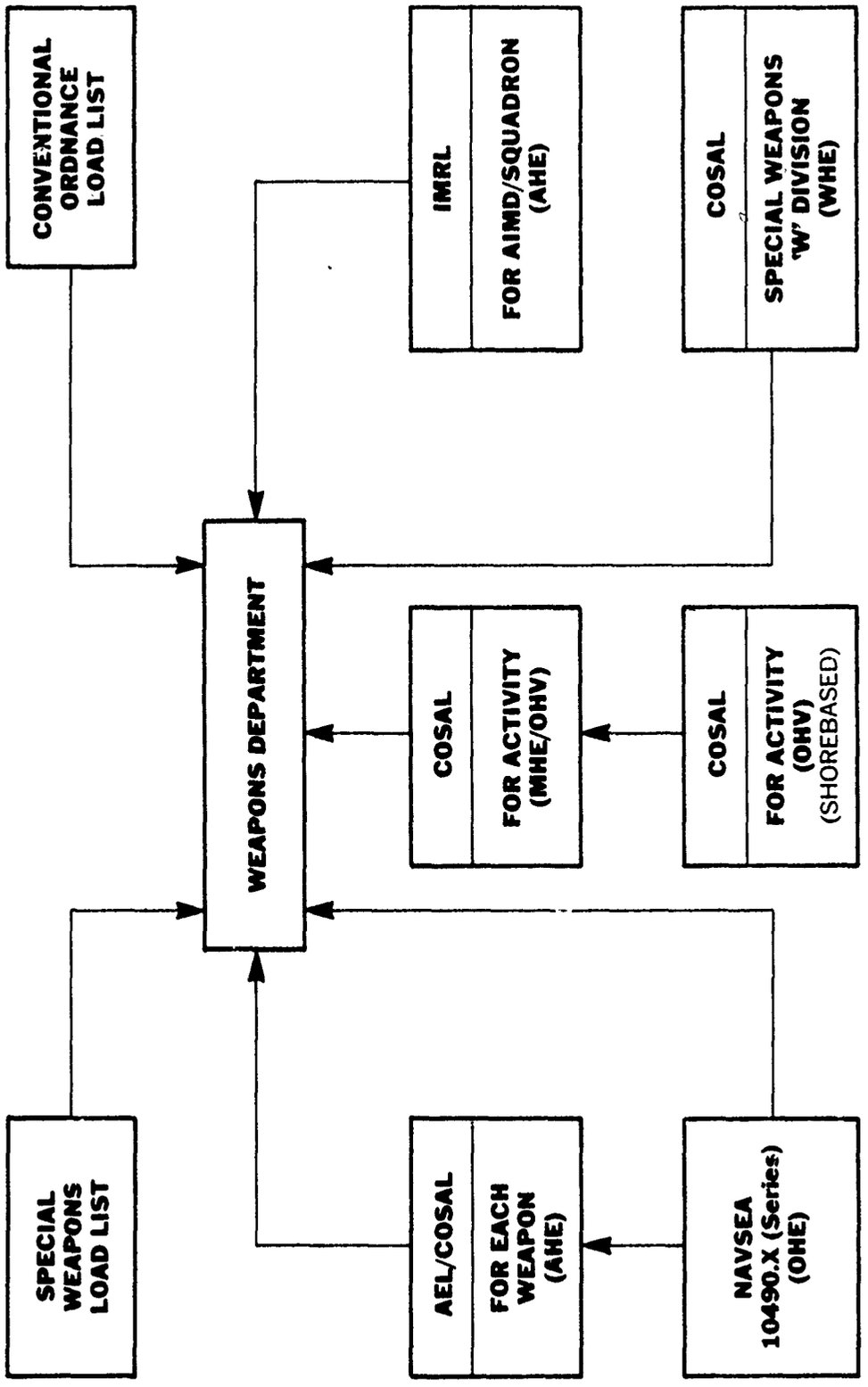

FIGURE 5. WEAPONS DEPARTMENT ALLOWANCES

Such duplication occurs either because COSAL allowances were specifically requested by the using activity or because AEL/COSAL allowances were not cancelled or reduced when IMRL allowances were established. A contributing factor may be the apparent lack of IMRL training for Weapons Department personnel, particularly those holding AO, GM, MM, and TM ratings.

(3) Shipboard 3-M. One particular disadvantage to listing AHE within the COSAL is that all such listed equipment is considered to be part of the ship or facility. For some items, such as fixed or stationary shipboard load handling equipment, this is proper and advisable. However, the listing of AHE within the COSAL renders all equipment ineligible for maintenance, inventory control, certification load testing, and other related support from the AIMD.

(4) SPCC/ASO as ICPs

(a) The Ships Parts Control Center normally prepares AEL/COSAL allowances inclusive of all required GSE end-items required for weapons support. This is accomplished irrespective of whether or not the allowances are intended for aviation or non-aviation activities. The GSERD prepared by NAVAIR or the CFA, is the document which facilitates the entrance of the GSE end-item into the ADMRL. When the GSERD is finally submitted, existing AEL/COSAL allowances are retained. (This procedure is currently being modified to include the reduction of the AEL/COSAL allowance to zero once the GSERD is submitted, unless there is some other reason to maintain duplicate allowances.)

(b) However, in the case of many AHE end-items employed with air-launched weapons, applicable GSERDs were not provided by NAVAIR and/or the CFA to the Inventory Control Point at ASO soon enough to complete the provisioning process. As a result, ADMRL allowances were not prepared, as required, and all existing AEL/COSAL allowances for these particular AHE end-items remained in force because the AEL/COSAL was the only allowancing document.

(c) The SPCC and the ASO are currently engaged in a NAVAIR sponsored program to backfit existing AEL/COSAL allowances of GSE end-items to reflect recent inclusion of these items into the ADMRL. However, this program is not specifically directly towards AHE (refer to Appendices E and F).

d. Conclusion. It is irregular for any military activity to utilize as many different allowance lists as the Weapons Department must use in order to operate. Therefore, every effort should be made to consolidate allowances wherever possible in order to eliminate duplication and provide for more equitable distribution of available assets (refer to section VII, paragraphs K, L, and M).

3. Reported Problems With NAVSEA Instruction 10490.X (series) COSAL Allowance System

a. Overview. There is significant inventory of WHE consisting of both NAVAIR and NAVSEA AHE/OHE end-items which are not listed in the

ADMRL. The majority of AHE is included on the activities' COSAL. Normally, NAVSEA managed items of AHE are placed within an activity's COSAL via NAVSEA Instruction 10490.X (series). However, these NAVSEA Instructions do not reflect the total allowance of COSAL AHE allowed the ship/station. Due to shortages of NAVAIR AHE at some stations having insufficient IMRL allowances and the complete lack of IMRL allowances at others, NAVSEA Instruction 10490.X (series) been expanded to include many IMRL AHE end-items. Furthermore, examination of several NAVSEA 10490.X (series) Instructions disclosed duplications of certain items between COSAL and IMRL allowances. This situation should be corrected because it contributes to an inequitable distribution of AHE assets and causes confusion in the Fleet.

b. Findings

(1) NAVSEA Instruction 10490.2 is confusing to fleet personnel in that it does not include air-launched weapon AHE or other NAVAIR items for CV (shipboard) allowances.

(2) NAVSEA INSTRUCTION 10490.7 is misused in that it has been expanded to include many NAVAIR items normally listed in the IMRL for shore station allowances.

(3) IMRL coordinators at the TYCOM do not recognize responsibility over NAVSEA Instruction 10490.X (series) items.

c. Discussion.

(1) Based on Weapons. Most WHE is allowed to naval ships and shore activities via the AEL of the COSAL. This allowance document includes all handling/testing equipment and the tools required to support various weapon types, irrespective of which hardware Systems Command has cognizance over the equipment. Of the many documents which provide input to the AEL/COSAL, perhaps the least understood are NAVSEAINST 10490.X (series) documents. These instructions, which currently number seven, are not allowance lists in themselves, but recommended allowances for OHE/tools serving the same purpose as the ADMRL. The instructions assist SPCC in constructing the AEL/COSAL for ships and shore activities which possess various weapons. Unlike the ADMRL, recommended allowances are based on the types of weapons serviced with a single number end-item allowance per activity. Preliminary NAVSEAINST 10490.X (series) documents were reviewed by the cognizant TYCOM prior to issuance and allowances were increased or decreased through correspondance with NAVSEA (SEA 06G3).

(2) NAVSEAINST 10490.2. NAVSEA Instruction 10490.2, Portable Ordnance Handling Equipment for AAW and ASW Ships, provides for allowances of NAVSEA cognizant OHE to all aircraft carriers in accordance with each class of CV. The following weapons are supported: airborne mines (MK 56-1), acoustic torpedoes (MK 44/46), Terrier BT (RIM-2D)/Terrier HT (RIM-2F), BPDMS/Sea Sparrow (RIM-7E5), Shrike (AGM-45) and Sparrow (AIM-7E4). This Instruction also includes some NAVAIR AHE; e.g. Weapon Skid Aero-21C, Skid Adapter Aero-58A (Front/Rear), Soft Belt Adapter Aero-64A, and Munitions Trailer Aero-51B for use on board Submarine Tendors (AS) in support of the MK-48 Torpedo. However, NAVAIR AHE in support of air launched weapons is not contained within NAVSEAINST 10490.2.

(3) NAVSEAINST 10490.7. NAVSEA Instruction 10490.7, Portable Ordnance Handling Equipment Allowance for Shore Stations and Training Activities for Support of NAVSEA/NAVAIR Weapons, provides for allowances of both NAVSEA and NAVAIR WHE to shore activities which either do not possess an IMRL or where the IMRL for the activity is deficient. NAVSEAINST 10490.7 was proposed by NAVSEASYSCOM in order to reduce shortages of WHE created by the incompatiblity of the AMMRL Program to properly support weapons requirements. Thus, many aviation shore activities requested special allowances under NAVSEAINST 10490.7. This was accomplished by letter request to NAVSEA and usually by-passed the AIMD, TYCOM, and NAVAIR.

(4) AEL/COSAL Problems. Unfortunately, the NAVSEAINST 10490.X (series) and the AEL/COSAL are not analogous although fleet operating personnel believe they are. The AEL/COSAL contains a large number of NAVAIR cognizant AHE which are not contained within any other allowancing document. NAVAIRSYSCOM has never published its own 10490.X (series) instruction to cover the AHE required by an activity. The weapon contractor usually provides a list of the required test and handling equipment and tools which is normally forwarded to the SPCC. Thus, all such equipment listed within the AEL/COSAL has no associated allowancing instruction, no in-use asset reporting requirement, no maintenance support from the AIMD, and no provisions for spare parts. Furthermore, incorporating NAVAIR AHE into NAVSEAINST 10490.7 often creates duplication of allowances between the IMRL and the COSAL. The IMRL managers at the TYCOMs report that they do not have either the personnel or the resources to assume complete responsibility over all COSAL listed WHE.

d. Conclusions.

(1) The problem of determining and establishing proper allowances for WHE is rather complex and is especially complicated for those aviation activities which have a mix of IMRL and COSAL equipment. However, new ADMRL allowancing procedures as recommended herein should eliminate or alleviate many of these problems. When fully implemented, all WHE should be combined into one allowance list irrespective of which Systems Command (NAVAIR/NAVSEA/NAVSUP/NAVFAC) has cognizance over the item.

(2) It is ultimately intended that all WHE used by aviation activities will be served by the ADMRL Program exclusively. Air Capable Ships, i.e. DD-963 class destroyers, will have an IMRL in addition to their COSAL/NAVSEAINST 10490.X allowances.

(3) In general, NAVSEAINST 10490.X (series) should cover only NAVSEA OHE allowances to non-aviation activities. However, this instruction may include NAVAIR end-items for some non-aviation activities for use with non-aviation weapons, i.e. MK-48 Torpedo, ASROC, etc. In this event, maintenance on all such AHE must be performed by the activity in accordance with the maintenance plans/MRCs prescribed by NAVAIR. The only reports required are inuse inventory reports which should be periodically forwarded to the ICP.

(4) Specific recommendations are contained within section VII, paragraphg N and O.

C. MAINTENANCE MANAGEMENT OF AHE

1. Specific Responsibilities for AHE/OHE Maintenance Not Contained Within Any Known Document

a. Overview. Practically all WHE used by naval air activities may be divided into two functional areas: 1) Equipment which directly or indirectly supports the weapon or aircraft; and 2) Equipment which, by virtue of its design or function, is considered peculiar to the ship or station. Accordingly, maintenance policies, procedures, and responsibilities would be expected to be contained in OPNAVINST 4790.2A, Naval Aviation Maintenance Program, and OPNAVINST 4790.4, Ship's Maintenance and Material Management (3-M) Manual, respectively. Unfortunately, although both of these documents provide excellent information and instructions in support of the maintenance functions of aircraft and ships, neither document specifically addresses weapons handling equipment. As a result, the Weapons Department, AIMD, PWD, and other divisions or departments who are responsible for maintenance functions, must consult a myriad of publications pertaining to the custody, maintenance, certification/load testing, and inventory control of WHE. (This is a Navy-wide problem involving many regulations, instructions, and directives and as such, is far beyond the scope of this study.)

b. Findings

(1) Maintenance responsibilities for Armament Ground Support Equipment are not specified within OPNAVINST 4790.2A (NAMP) Chapter 14.

(2) Maintenance performed on AHE by the Weapons Department is not being reported via Aviation 3-M.

(3) Responsibilities for NAVSEA OHE are not indicated in OPNAVINST 4790.4, NAVSEA OP-5, NAVSEA OP-3347, or other documents.

(4) Problems were generated by the impact of CNO letter Ser 592D of 7 June 1976 on shipboard AIMD (see Appendix G).

c. Discussion

(1) NAVAIR AHE

(a) Specific maintenance responsibilities for AHE are not included in OPNAVINST 4790.2A. As a result, many AHE end-items do not receive I-level maintenance from the AIMD.

(b) A contributing problem concerns the large amount of NAVAIR/NAVSEA/NAVSUP cognizant WHE included on the ship's COSAL. The AIMD does not assume the responsibility for the accomplishment of I-level maintenance functions for all such equipment due to the following statement contained within the introduction to Chapter 14 of OPNAVINST 4790.2A:

> "This chapter applies primarily to those items of GSE that are included in the AMMRL program. Many items excluded from the AMMRL are considered part of the basic facility (ship or station) and are governed by other directives."

(c) The opinion expressed by both shipboard AIMDs visited was that the foregoing statement excludes from maintenance all AHE/OHE/MHE employed in weapons handling, assembly, and in the movement of weapon containers and FIULs. Also, most of these items cannot be satisfactorily supported, maintained, and load tested by the Weapons Department aboard the CV.

(d) Weapons Departments have a mix of AHE for which in some cases they are the custodians and in others where they hold on a sub-custody basis from the AIMD. This dual custody situation has precipitated a great deal of misunderstanding with respect to adequately defining responsibility for periodic maintenance, inventory control, load test certification, and 3-M data reporting. It has further caused a conflict in maintenance responsibilities because each functional area; i.e. department, division, work center, etc., has not been clearly defined within OPNAVINST 4790.2A. Weapons Departments are not designated Aviation 3-M reporting activities; therefore, maintenance performed by them on their AHE is not reported in the same manner as squadron O-level users.

(e) OPNAVINST 4790.2A leaves too much latitude for individual interpretation and AIMD's 900 WC interprets the instruction to include only those end-items which come in direct support of the aircraft; i.e. aeronautical equipment. Unfortunately, this interpretation excludes a large amount of AHE which is essential to support weapons which constitute an integral part of the aircraft.

(2) NAVSEA OHE

(a) The absence of maintenance responsibility over NAVAIR AHE is not peculiar to the aviation maintenance program. There are no known directives which delineate specific maintenance responsibilities over NAVSEA's OHE. The accepted NAVSEA policy is that maintenance responsibility rests with the custodian. MRCs/MIPs are available for most NAVSEA OHE including all portable OHE. I- and D-level maintenance functions are covered in OR-99 documents which are employed by activities capable of I-level maintenance functions; however, there are no specified I- or D-level functions available aboard the CV in order to accomplish such maintenance outside of the AIMD. Shipyard facilities are sometimes utilized because most CVs are not aware of the I- and D-level facilities available at NWS Earle, NWS Yorktown, and NWS Seal Beach. (Visits made to the NARF at NAS North Island, conducted in accordance with this survey, indicated that I- and D-level maintenance functions were being performed on the MK 42/45 Handtruck. The MK 42/45 Handtruck should have been maintained at NWS Seal Beach vice NARF North Island.)

(b) For the past 5 years, NAVWEPSTAs Yorktown, Seal Beach, and Earle have been the only NAVSEA stations that have been fully indoctrinated into the 3-M PMS as managed by NAVSEA. CVs home ported at NAVSTA Norfolk and NAVSTA San Diego should have transfered their NAVSEA OHE to either Yorktown or Seal Beach for I-level maintenance.

(3) NAVSUP/NAVFAC MHE/Vehicles.

(a) The marked difference between the NAMP and Shipboard 3-M performance and reporting has not been recognized as a criteria for assigning maintenance responsibility. When it became obvious that a number of COSAL listed items were not being properly maintained, the AIMD was specifically assigned the responsibility. CNO letter Ser 592D/723781 of 7 June 1976 (see appendix G) has identified shipboard AIMDs as being responsible for nine general categories and/or specific items of handling equipment. All of these items were previously covered under Shipboard 3-M vice the NAMP; however, the CV Engineering Department facilities available for maintaining these items was apparently inadequate.

(b) Fire trucks, Raymond Forklifts, forktrucks, etc. employ shipboard MRCs/MIPs which specify ships engineering ratings, i.e. EM, MM, etc. vice Aviation Maintenance (Group 9) ratings. Furthermore, the term "ordnance equipment" was not adequately defined within the CNO letter. It could be presumed the ordnance equipment was to include the entire gamut of weapons handling equipment, including both IMRL and COSAL listed items.

(c) 15 Raymond Electric Forklifts, employed within CV magazines, require commercial maintenance manuals vice NAVAIR maintenance manuals. This end-item has never been provisioned by SPCC and spare parts must be acquired commercially. Reporting is accomplished in accordance with SPCC Instruction 10490.1A (see appendix H).

d. Conclusion. AIMDs have the NAMP which combines all the necessary information that describes their overall function and assigns responsibilities. Weapons Departments have no such document, but must utilize a multitude of SWOPS, NAVSEA, and NAVAIR publications without the benefit of a comprehensive index. Often duplication and contradiction results where similar instructions are issued from two or more hardware Systems Commands. Therefore, if such a Weapons Department document were developed, it should address that equipment which supports the weapons system as well as that which supports the ship or facility (refer to section VII, paragraphs Q and R for specific recommendations).

2. Operational Inconsistencies & Other Factors Affecting Accomplishment of AHE Maintenance Functions.

a. Overview.

(1) Operational and administrative variations between one naval activity and another should be expected, particularly when considering that no two-similar aviation ships or shore stations have facilities/missions which are identical. Physical capability, number/type

of squadrons supported, explosive ordnance transhipment responsibilities, location of weapons magazines from aircraft loading areas, road conditions, etc., are but a few of the many factors which influence the distribution of work, personnel manning levels, and individual assignments.

(2) It is significant, however, when one observes wide differences in the conduct of AHE maintenance functions without a corresponding difference in the situation or mission. Such differences often involve conflicts as to whether a certain maintenance task on AHE should be performed by an AO or by an AS.

(3) Maintenance tasks are not always assigned commensurate with functional responsibility with respect to the AO/AS ratings. In some cases, manpower allocations do not accurately correspond to increased work loads imposed on the AIMD and the Weapons Department especially where the AO and AS ratings are directly involved. It is believed that the occupational standards for these ratings are unclear and misleading.

b. Findings

(1) Wide differences exist between one activity and another with respect to operational functions, personnel assignments, and manning levels.

(2) Maintenance tasks are not always assigned commensurate with functional responsibility; i.e. AOs doing AS work, etc.

(3) Proper storage space/facilities affect the reliability and maintenance of AHE.

c. Discussion

(1) Shore Activities. Although shore based AIMDs and Weapons Departments are similar to one another with respect to their administrative organizations, there are wide differences with respect to their operational functions, mission requirements, and manning levels. Comparisons have been made between an east coast and a west coast NAS visited in connection with this Fleet survey:

(a) NAS Miramar has more than twice the personnel within the Weapons Department than NAS Oceana. Since the Weapons Department magazines at Miramar are located at a remote area, Miramar has allowed to them an adequate number of pickup and stake body trucks to transport the ordnance to the aircraft loading areas. Consequently, the Weapons Department has four civilian mechanics who are responsible for preventive and corrective maintenance on these vehicles, although vehicular maintenance functions are normally conducted by PWD at most naval shore activities. When asked to comment on the desirability of the Wheeled Tractor, Aircraft GSE A/S 32A-30, the Weapons Department liked the idea but did not require such a vehicle because of its restricted utility and personnel carrying capabilities.

(b) The AIMD GSE (900 WC) at NAS Miramar interprets the NAMP to mean that it (900 WC) is responsible for performing preventive and corrective maintenance on only that AHE which has running gear and/or contains an internal combustion engine. Accordingly, only the Aero 33D/E Trailer, Aero 51B Trailer, 21A/C Bomb Skid, and Aero 47A Weapons Loader are maintained at GSE 900 WC. The HLU-196/E Bomb Hoist is also maintained by AIMD 900WC, but this maintenance is limited to the engine only. Maintenance of other components of the hoist, i.e. cable, clutch, etc. is performed by AIMD 710 WC. The AIMD 710 WC also has the responsibility for the maintenance of bomb racks and launchers, and monitors the armament equipment pool. The Weapons Department at NAS Miramar is responsible for the maintenance of skids, skid adapter, trailers etc. and ordnance load configuration, i.e. configuring the skid/trailers to accept the weapon.

(c) On the other hand, NAS Oceana AIMD 900 WC and AIMD 710 WC apparently do not differentiate work tasks between that work required of an AS and an AO. AOs assigned to the AIMD 710 WC are responsible for complete maintenance functions on the HLU-196/E, engine as well as hoist. This type of work should more correctly be performed by the 900 WC, vice 710 WC.

(d) Due to factors not completely understood, the AIMD 710 WC at Oceana is required to configure skids for receiving various weapons loads ready for pick up by the Weapons Department or the using squadrons. This responsibility should more correctly be performed by the user. AIMD functions within both the 900 and 710 Work Centers should be confined to maintenance functions only.

(e) At both Miramar and Oceana, most weight testing is conducted by the Public Works Department. However, recent reports from the Ammunition Hazards Board (AMHAZ) indicate that periodic load testing is only partially being complied with.

(2) Shipboard Activities. Much like the shore based aviation activities, there are wide functional differences between the extent of responsibility assumed over the maintenance of AHE when comparing the USS Kennedy to the USS Constellation. Administrative organizations are the same however, and constructed pursuant to OPNAVINST 4790.2A.

(a) The USS Constellation AIMD 900 WC requires the Weapons Department to support the personnel requirements of the work center by assigning three AOs TAD to the 900 WC. These AOs are assigned the responsibility of performing most routine and preventive maintenance functions on all AHE. Generally speaking, this procedure has been working satisfactorily; however, the technical qualifications of the individuals assigned has carried some concern at the AIMD 900 WC. Initially, the Weapons Department has been assigning (TAD to AIMD) three of their least qualified personnel, i.e. AAs or ANs. The AIMD contends that three qualified men are necessary to perform required maintenance function on AHE, and all such assigned personnel should be AOANs (designated strikers) or higher. This situation was temporarily solved, however, by the AIMD and Weapons Department by assigning the personnel prior to their reporting aboard. (This personnel assignment agreement

was in direct contrast to the USS Kennedy who had no TAD Weapons Department personnel assigned to the 900 WC of the AIMD. As a result, periodic maintenance on all AHE was not as effective as that performed on board the USS Constellation.)

(b) Aboard the USS Kennedy, the Weapons Department holds all required IMRL listed AHE on a sub-custody basis from the AIMD. Preventive maintenance functions are performed by Weapons Department personnel although 3-M reporting data is neither completed nor submitted. However, the USS Constellation's Weapons Officer has not and would not sign the OPNAV Form 4790/51 custody cards for any of the AHE listed on the IMRL held by the Weapons Department. (This situation reinforces the belief that the Weapons Department are users not custodians.) Although this is recognized as basic non-compliance with the requirement of OPNAVINST 4790.2A, by his not signing the custody cards, the Weapons Department cannot be held directly responsible for the maintenance, inventory control, accountability, etc. of the AHE. As a result, in-use asset reporting is sometimes incomplete and inaccurate.

(3) Storage/Stowage

(a) Equipment shelter and/or stowage presents a major problem at all activities visited. All Raymond Forklifts are stowed on the Mess Deck aboard the CVs. Practically all the GSE held at the 900 WC is stowed on the hangar deck, and 50% of all the GSE held is AHE. All the remaining AHE is stowed in the magazines or inert storage spaces. Adapters, skid handles, and various smaller AHE components are least accessible for the performance of periodic maintenance and/or in-use asset inventory reporting.

(b) There is generally a deficiency of storage facilities for AHE when it is not being used. Comparing one ship to another, there are great differences in spaces alloted for AHE storage. One CV has designated storage spares that are not readily accessible because they are located on the 02 level within the overhang voids. Aboard another CV, some storage is available on the third deck with limited access for storing and removal of AHE when required. However, during major weapons exercises, some 300-500 man-hours are required to obtain the required skids and adapters from stowage and configure them for use. Moreover, preventive maintenance functions, i.e. lubrication, and corrosion control, performed on AHE in storage is greatly hindered due to the necessity to stack equipment into tight holds.

d. Conclusion. Under existing directives, it is implied that all AHE is supported as Common Ground Support Equipment (CGSE); i.e. squadron O-level at AIMD Work Center 330 (Armament/Line) and I-level at AIMD 900 Work Center (GSE). In actual practice however, as the principle user of AHE, the Weapons Department has assumed the bulk of the I-level support in addition to O-level work. This situation has resulted in a degradation of some AHE which can be attributed to the lack of adequate facilities, equipment, and training of AOs. (Refer to section VII paragraph S, T, and U for specific recommendations in this area.)

3. Problems Relating to the Accomplishment of Periodic Load Testing of AHE and Other Aviation Ordnance Safety Requirements.

a. Overview.

(1) Periodic weight testing of weapons handling equipment, as required by NAVSEA OP4/OP5/OP3347, SWOP-H1, NAVAIR 19-600 MRCs, NAVFAC P300, NAVSEA OD-44941, etc. presents an unmanageable myriad of sources and specifications required to accomplish maintenance, inspection, test, and certification of concerned explosive handling equipment.

(2) The majority of beams, carriers, strongbacks, and other portable armament handling GSE under the cognizance of NAVAIR, are not currently covered by any supporting documentation which specifically describes maintenance procedures and/or the conduct of periodic load testing and certification. As a result, many end-items of portable armament handling GSE are not being properly tested or are not being tested at all.

(3) The above situations cause a serious concern in the fleet because the absence of maintenance and testing increases the possibility of an explosive incident occurring on board ship or at a shore activity. (Individual instances of noncompliance have been reported by Explosive Safety Survey Teams and Naval Technical Proficiency Inspection (NTPI) Teams.) Further, there exists a number of other related problems concerning the content of various naval aviation ordnance precaution publications. Many of these publications also require standardization in the interest of explosive safety. NAVSEASYSCOM has overall management responsibility for explosive safety regulations.

b. Findings

(1) There is confusion in the fleet concerning the general requirements addressing safety certification/testing of AHE/OHE.

(2) There exists no single source publication which addresses the inspection, testing, and certification of both NAVAIR and NAVSEA AHE/OHE.

(3) There is a lack of standardization among all the various publications relating to aviation ordnance safety precaution and the maintenance of ordnance equipment.

(4) There are no known directives which establish formal liaison between NAVAIR and NAVSEA regarding explosive safety certification of WHE.

c. Discussion.

(1) Test Requirement. The general requirements addressing safety certification and testing of explosive ordnance handling equipment used at naval shore activities and on board ship are contained within NAVSEA OP-5, Volume 1, Chapter 8-6, and NAVSEA OP-3347, Chapter 1-6, respectively. Interpretation of these general requirements by fleet

operating personnel has resulted in considerable confusion, particularly when the general requirements are applied to specific items of portable armament handling equipment. Naval aviation ships and shore activities possess a mix of both NAVSEA and NAVAIR cognizant OHE/AHE requiring testing. The general requirement contained in reference A (NAVSEA OP-5) is quoted, in part, as follows:

> 8.6.3 MAINTENANCE, INSPECTION, AND TESTING OF AMMUNITION AND EXPLOSIVES LIFTING EQUIPMENT.
>
> 8.6.3.1 General Requirements. To assure maximum safety and efficient operation, equipment used for lifting ammunition and explosives must be periodically maintained, inspected and tested. In general, cranes, hoists, slings, bands, beams, strongbacks, spreader bars and similar lifting gear shall be tested as follows:
>
> Slings, bands, beams, strongbacks, spreader bars, etc., shall be periodically tested at 200% to 215% of their rated static load. Duration of test shall be two minutes for metallic items, and five minutes for non-metallic. For testing requirements see OD 44941, "Periodic Testing Arrangement for Naval Ordnance Handling Equipment."
>
> Except as otherwise indicated, ordnance lifting equipment used ashore shall be tested at least once every 6 months. Ordnance lifting equipment used aboard ship shall be tested at least once every 18 months, preferably to coincide with ship availability. The above testing schedule shall be adhered to for all ordnance lifting equipment unless specifically exempted by NAVSEASYSCOM. Ordnance lifting equipment includes beams, carriers, hoisters, links, slings and other ordnance lifting equipment that provides interface service between the item being lifted and the prime lifting equipment.

(2) Partial Compliance. Visits made to six fleet activities conducted in connection with this survey revealed that the above requirements are only partially being complied with. Shore based aviation activities have the greatest problem in fulfilling the requirement due to the need to perform load tests on each piece of equipment every 6 months. Shipboard OHE/AHE testing is accomplished in a variety of ways depending on the equipment being tested and the ship concerned. Shore based activities have approximately 100 items requiring testing, whereas CVs have about 200 items to test; approximately one-third of the items of portable ordnance handling equipment are under the command cognizance of NAVSEA. Weapons Departments do not distinguish NAVSEA from NAVAIR

portable ordnance handling equipment because they look the same and perform a similar function.

(3) On one ship visited, the Weapons Department transfers all beams, carriers, slings, strongbacks, etc. to its supporting shipyard for weight testing. The cost of developing procedures and performing the load test must be paid for by the ship's Weapons Department. It was reported during the survey that this shipyard has been continuously charging the ship for the development of specific testing procedures for each end-item of NAVSEA or NAVAIR cognizant equipment, although applicable testing instructions are currently available for NAVSEA cognizant equipment in NAVSEA OD 44941. The costs for completing the testing requirement nearly approach the actual initial cost of the equipment itself. Testing of IMRL listed AHE is sometimes accomplished by the ship's AIMD, NARF, or Naval Weapons Station.

(4) Ship Tests. Aboard another ship, the Weapons Department personnel have been attempting to fulfill the testing requirement within their own spaces, aided by AIMD personnel. Although ships personnel are attempting to meet the load test requirement to the best of their ability, the lack of test equipment, fixtures, and applicable detailed instructions inhibits complete accomplishment of the requirement. No problems were reported with respect to fulfilling the load tests on IMRL listed equipment such as the HLU-196/E Bomb Hoist and the Aero 61B Sling. These tests are performed by the 710 WC of the AIMD since testing procedures are contained within the MRCs for these items. It is significant to note that only one of the activities visited was aware of the availability of NWS Earle and NWS Concord testing facilities to perform the load tests on all NAVSEA cognizant OHE. Since this information was never promulgated officially by NAVSEA within any known ordnance document or safety manual, it is therefore not commonly known to Fleet personnel. An exchange of correspondance resulted in a definitive explanation of NAVSEA's policy (see Appendix I).

(5) Ordnance Publications. In a letter addressed to CNO (OP411) (see Appendix J), COMNAVAIRLANT had recommended that an effort be made to consolidate or reduce existing ordnance safety publications to an absolute minimum. Redundant information contained within NAVSEA OP-4, NAVSEA OP-5, and NAVSEA OP-3347 particularly were mentioned. Among the more significant recommendations were the issuance of joint (NAVAIR/NAVSEA) publications for aviation ordnance in those cases where both Systems Commands establish requirements on similar types of ordnance. It is significant that COMNAVAIRLANT also recommended the development of a single publication similiar to the NAMP manual (OPNAVINST 4790.2A) that contains all technical data, procedures, forms, reports, etc. used by naval aviation weapons departments.

d. Conclusions. The major problems regarding periodic load testing and aviation ordnance safety requirements stem from the following deficiencies:

(1) NAVSEA OP-5, NAVSEA OP-3347, SWOP H-1, etc. do not assign specific responsibilities for the accomplishment of testing and certification.

(2) NAVSEA OD-4491 excludes all the portable ordnance handling equipment coming under the cognizance of NAVAIR.

(3) NAVAIR has no comparable publication to NAVSEA OD-4491, Periodic Testing Arrangements for OHE, which specifically addresses the testing and certification of portable ordnance handling equipment. NAVAIR 17-1-114, Inspection and Proof Load Testing of Lifting Slings and Restraint Devices for Aircraft and Components, pertains to the inspection and proof load testing of aircraft lifting slings. The testing criteria is dissimilar to the criteria required for portable ordnance handling equipment.

(4) There are no known directives which establish formal liaison between NAVAIR and NAVSEA in the area of explosive safety certification of WHE.

(5) The CNO has assigned the overall responsibility for explosive ordnance safety to NAVSEA, but the life cycle of most major explosive weapons systems are assigned to NAVAIR.

(6) Since the disestablishment of the Bureau of Naval Weapons organization, NAVAIR has been supplying some AHE to the Fleet operating forces without the supporting safety inspection documentation, i.e. MRCs, manuals, etc.

(7) In consideration of the above, NAVAIR should assume a more active role in developing and implementing a viable load test and certification program for all AHE. Such a program should be developed in close liaison with NAVSEA who should act as the responsible agency. Specific recommendations are contained within section VII, paragraphs V, W, X, and Y.

D. INVENTORY MANAGEMENT, CONTROL, and MATERIAL SUPPORT of AHE

1. Consolidated In-Use Inventory Reporting System Problems

a. Overview. Inventory reporting of IMRL listed end-items of AHE is the same as required for other GSE and is set forth within NAVAIRINST 4420.1C, the AMMRL program. The custodian of the AHE is responsible for inventory and submission of the GSE inventory reports to the ASO, NAVAIR, and the TYCOMS. These inventory reports provide the information required to determine the material readiness condition of each ship or shore activity. Through the consolidation of each individual activity's inventory report into the Consolidated In-Use Asset Report, determinations can be made concerning the material readiness condition of specific areas, specific commands, and the overall Navy-wide WHE inventory. These reports are also used for management decisions at all levels in the redistribution of AHE, development of budget requests and end-items procurements. It is therefore essential that all reporting activities forward timely, complete, and accurate inventory reports to the appropriate NAVAIRSYSCOMREP. Unfortunately, the GSE Consolidated In-Use Asset Report has not been entirely effective, and AHE has been reported as one of the weakest areas.

b. Findings.

(1) The conduct of inventories is primarily hampered by the task of locating and identifying AHE end-items.

(2) Inaccuracies with the in-use asset reporting system attributed to operational problems and a lack of discipline in inventory methods.

(3) The Consolidated In-Use Asset Report has proven itself to be ineffective as the sole criterion for the re-procurement of AHE, a condition which has caused shortages in the Fleet.

(4) There exists no in-use asset reporting system for AEL/COSAL or NAVSEAINST 10490.X (series) listed end-items of AHE/OHE under the supply cognizance of SPCC.

c. Discussion.

(1) Inventory Reporting

(a) NAVAIR Instruction 4420.1C places the responsibility of taking inventories and submitting AHE inventory reports with the reporting custodian. As with all IMRL listed GSE end-items, AHE so listed becomes the reporting responsibility of the AIMD. The conflicts in maintenance responsibility between the Weapons Department and the AIMD (discussed within section VI, paragraph C, 2), has also precipitated problems with inventory reporting. The Weapons Department is responsible for inventory reporting as shown in Figure 6.

(b) There are special problems associated with conducting accurate inventories of AHE not usually experienced with

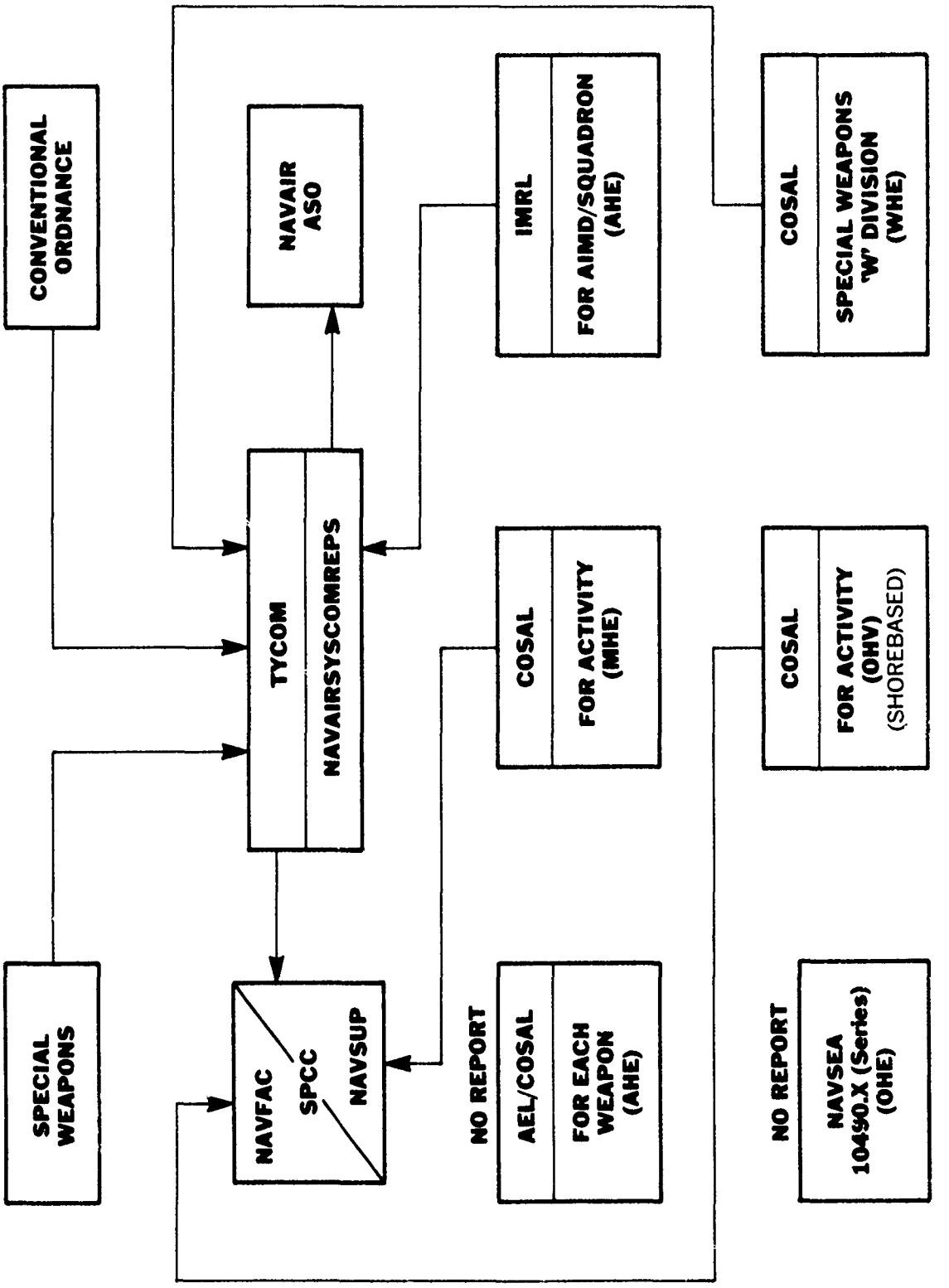

FIGURE 6. INVENTORY REPORTING

other GSE. The most consistently reported problem is the arduous task of locating and identifying the multitude of AHE end-items. The Weapons Department has a heterogenious mixture of IMRL and COSAL listed items of WHE. Knowledgeable manpower for conducting the inventories is often unavailable. Although they know the equipment, Weapons Department personnel, being the sub-custodian of most AHE end-items, are sometimes not especially motivated towards conducting AHE inventories on behalf of the custodian AIMD.

(c) Only about half of the total number of end-items of AHE used by the Weapons Department require inventory. It should be noted that the Consolidated In-Use Inventory Reporting System only pertains to IMRL listed items. NAVAIR cognizant items of AHE listed within the AEL portion of the COSAL require no inventory whatsoever, nor do NAVSEA cognizant items listed on the NAVSEAINST 10490.X (series). The problems associated with discriminating between NAVAIR IMRL and the NAVAIR/NAVSEA COSAL items requiring (or not requiring) inventory strongly affects the accuracy of the inventory.

(2) Shipboard Problems. Many operational problems, as well as stowage problems discussed in section VI, paragraph C, 2 are encountered aboard the CV in the process of conducting inventories:

(a) Items of AHE which are stored on the Hangar and Mess Decks are readily available and thus more easily inventoried.

(b) A large number of bomb skids, skid adapters, and handles are stowed in mixed units and quantities in any number of weapons assembly areas, magazines, and dead spaces.

(c) Since Weapons Departments are not directly responsible for inventory control, attempts to better organize AHE stowage and to facilitate inventory procedures are often disregarded. As viewed by the using Weapons Department, operational commitments and the critical shortage of adequate shipboard stowage space are regarded to be more important factors than inventory control.

(d) Accessibility to some magazine stowage areas, due to security regulations, has hampered the conduct of inventories in some cases.

(e) Many routine, "no-change" inventory reports are submitted without regard to custody changes (cross-decking) of AHE items from one carrier to another.

(f) The Raymond Electric Forklift, as well as other items of materials handling equipment used by the Weapons Department aboard the CV, are inventoried and reported in accordance with SPCC Instruction 10490.1A. As discussed within section VI, paragraph C, 1, the AIMD is assigned the responsibility for maintaining the Raymond Electric Forklift, the Weapons Department is the user, and the Supply Department is responsible for inventory control. This situation has not caused problems, however, it is another example of the lack of uniformity in the management processes as discussed in Section VI, paragraph A, 1.

(3) Shore Based Problems. Aviation shore activities have experienced many of the same problems as CVs with regard to conducting in-use asset reporting of AHE. However, some peculiar problems have had considerable impact on the accuracy of the Consolidated In-Use Asset Report:

(a) Many aviation and non-aviation shore activities have equipment allowed to them via the COSAL because these activities do not have an IMRL. In-use asset reporting data is not required on COSAL listed items, although many such items are listed in the ADMRL Source Data.

(b) Activities as NAWF Macrihanish, NWS Yorktown, NAVMAG Guam, NAD McAlester, and others have an authorized allowance of many ADMRL listed items of AHE. With the exception of a few end-items supplied via special allocation, practically all activities are allowed this AHE via NAVSEAINST 10490.X (series). None of the NAVAIR AHE end-items listed on the NAVSEAINST 10490.X (series) appear on the in-asset report. A similar problem also affects many non-aviation ships; i.e. DD (LAMPS), AOE (VERTREP), etc.

(4) Major Errors

(a) The foregoing discussions principally dealt with the problems incidental to the conduct of fleet inventories of AHE end-items "on hand". MMajor errors in the Consolidated In-Use Asset Inventory Report were primarily attributed to operational problems, and/or the lack of reporting discipline. Both of these, in turn, are aggravated by the physical limitations of a shipboard environment.

(b) The Consolidated In-Use Asset Inventory Report is generally employed as a basis for calculating end-items procurements by the procuring agency. With the majority of GSE end-items, an estimate of shortages can be derived from the data submitted by making direct comparisons between the known total units procured and the "units on-hand". A sampling of 9 items, derived from the ASOs Consolidated In-Use Asset Inventory Report, are presented in Table I.

(c) Theoretically, the numerical difference between the "units procured" and the "units on board" should indicate a net shortage. Reporting errors in the "unit on board" column could be tolerated as long as the "units procured" remained constant and the "items on hand" reporting error was a known value. Accordingly, the procuring agency can then make minor adjustments to the quantities required via introduction of other statistical data in order to arrive at a valid estimate of the number of units to be procured.

(d) With respect to AHE end-items, there are shortages both in the "units procured" as well as "units on hand". Many AHE end-items are bought by NAVSEA, NAVAIR, and NAVAIR Field Activities without being reflected in the total "units procured" inventories.

ASO SUMMARY:
CONSOLIDATED IN-USE ASSET REPORT

FSN	NOMENCLATURE	TOTAL PROCURED	ON HAND LANT / PAC		IN-USE ASSET REPORT	ON HAND TOTAL
6RX 1730-179-1320-SX	AERO 39B	300	52	193	21	266
6RX 1740-133-7153-SX	AERO 51B	986	265	347	39	651
6RX 1730-123-16749-SX	HLU-196 B/E	150	30	20	0	50
6RX 1730-921-5510-SX	AERO 33D/E	597	168	190	0	358
6RX 1740-148-6492-SX	AERO 21	3700	836	1517	364	2717
6RX 1398-187-4796-SX	MAV-125E	450	33	32	7	72
6RX 1730-256-6551-SX	MK-7 MOD 3/4	N.A.	52	47	0	99
6RX 1730-013-7881-SX	AERO 63A-1	1788	196	270	311	777
6RX 4920-013-7883-SX	AERO 63A/ADAPTER	1788	46	277	508	831

TABLE 1

(5) All AHE Not Inventoried

(a) As previously mentioned, many items of AHE listed on NAVSEA Instruction 10490.X (series) are not considered as being "part of the system". (This is because COSAL items are not being inventoried nor reported in accordance with NAVAIR Instruction 4420.1C.) In addition, all AHE required in support of initial ship's outfitting allowances relating to the Improved Rearming Rate Program (IRRP), are purchased through the Naval Air Engineering Center (NAEC). Since these end-items were not purchased by ASO, they are not reflected on the "units procured" column inventories.

(b) For these reasons, the ASO cannot rely solely on the data contained within the Consolidated In-Use Asset Inventory Report as the criteria for reprocurement actions for CGSE. Most procurement actions result from the recommendations submitted during the recent Semi-Annual APN-7 Conference where representatives from the Fleet, ASO, and the Engineering CFA arrived at a tailored, negotiated requirement. Since hard data is not available, recommendations based on emperical data sometimes does not meet fleet needs, resulting in shortages of some AHE end-items and surpluses of others.

d. Conclusion. The majority of WHE is being treated as "consumables" because all portable OHE is not currently being inventoried. This situation is also being aggravated because the majority of AHE which comes under direct or indirect support of the aircraft, is inventoried by personnel who lack both formalized training in in-asset reporting methods and proper motivation. In general, the apparent lack of reporting discipline on the part of the "owner" and the "user" requires some re-emphasis of 3-M training for all concerned and the establishment of new management procedures. (Refer to section VII, paragraphs Z, AA, and AB for specific recommendations.)

2. Navy Supply System Not Responsive to Spare Parts Procurement For Many Items of AHE

a. Overview. Any management study dealing with the investigation of problems concerning management, allowancing, maintenance, and inventory control of AHE cannot overlook the importance of the adequacy of spares contained within the Aviation Consolidated Allowance List (AVCAL). For this reason, all ship/shore activities surveyed were invited to comment on the responsiveness of their supply system to spare part requisition orders, and to what extent shortages of spare parts affected the material readiness of prime end-items. It was the concern of the Survey Steering Committee that wide spread discrepancies in the area of spare parts procurement could indicate some related problems with the overall management system.

b. Findings

(1) Material requisitions for AHE parts sometimes never leave the activity.

(2) Bit and piece parts are the largest reported single problem with AHE items such as bomb skids, skid adapters, trailers, and other like AHE.

(3) Difficulties experienced with obtaining parts varies directly with the complexity of the equipment.

c. Discussion

(1) Bit-and-Piece Support

(a) Unavailability of bit-and-piece spare parts for skids, skid adapters, and other AHE was reported as a problem at most activities visited. Excessively long lead times are experienced in procuring parts for such more complex items as the Bomb Hoisting Unit HLU-196/E. This sometimes results in trying to procure parts via Open Purchase Order requisition in order to meet operational demands. At one activity, there were over 50 outstanding requisitions pending for parts required to repair AHE end-items. This was considered to be an in-house problem. However, the ASO had confirmed reports that requisitions for parts to AHE never leave the activity due to the relatively low number of unit parts being requisitioned as compared to other GSE end-items.

(b) Major parts requiring constant replacement include quick-release pins, lanyards, straps, and other similar fasteners used on skid adapters. Although this may be regarded as a transient problem, one shore activity was capable of employing only 25 of some 38 Aero 51B Bomb Trailers due to an acute shortage of weapon hold-down straps. In this instance, the use of 13 Aero 51B Bomb Trailers was dissapproved by the station's Explosives Safety Officer because of inadequate strapping. Generally speaking, the survey found that only a relatively small percentage of requisitioned spare parts are received within the time frame established for an AWP (awaiting parts) priority supply order.

(2) Major Components

(a) The most serious reported problem involving spare parts procurement for AHE occurred on board one ship visited where the AIMD reported that the entire ship's allowance of eight Weapons Loaders (ADU-400/E) were not operational due to a broken gearbox. The shortage of this major component had indirectly affected the performance of a total weapons system inasmuch as the ADU-400/E Loader is the primary method of loading/downloading the Phoenix missile on the F-14 aircraft.

(b) Other AHE prime end-items were affected less seriously at an aviation shore activity visited. Of the 19 SATS Air Launched Weapons Loaders (A/S 32K-1A/C) assigned, only 11 were RFI (Ready-for-Issue), two were inoperative AWM (Awaiting Maintenance), and six were AWP. These statistics are considered to be below the expected availability norms for the equipment involved.

(3) Non-Aviation Spares. As discussed in paragraph B, 3, many of the AHE end-items contained within the NAVSEAINST 10490.2 and NAVSEAINST 10490.7 which are used with non-aviation type weapons; i.e. Mk-48 Torpedo, ASROC, etc., are actually under NAVAIR cognizance. Since none of this AHE appears on the ASO inventory and is not required to be reported via the In-Use Asset Inventory Report, no spare parts for any of this equipment is procurred by the ASO. When spare parts are requisitioned by the non-aviation user, the resultant depletion of available spares impacts on the aviation community.

d. Conclusion. Most of the difficulties being experienced may be attributed to the relative newness of many of the more complex items of AHE. Many activities have not had sufficient experience with some of the newer end-items of equipment in order to anticipate problem areas. From a statistical point of view, reported problems with spare parts for AHE are probably no different than those experienced for other major items of GSE. Once all AHE is required to be identified via the in-use asset inventory report, the overall situation should improve. (See to section VII, paragraph AC for specific recommendations in this area.)

3. Problems With Initial Ship's Outfitting Allowances and Redistribution of AHE Prime Items.

a. Overview. The problems discussed within this portion of the survey report are the results of routine liaison among ASO, NAVAIR, COMNAVAIRLANT/COMNAVAIRPAC, NAEC/GSED and shipyards. The information presented herein serves to illustrate how deficiencies in the overall management system affect fleet level operations in the area of material support.

b. Findings

(1) The procedures for accomplishing initial ship's outfitting processes for AHE are often misunderstood at fleet level.

(2) TYCOM management of Consolidated Fleet Controlled Material Listed AHE causes problems in the redistribution of assets.

(3) Problems have been reported with Navy stock funded GSE end-items.

c. Discussion

(1) Initial Ship's Outfitting.

(a) Problems regarding the identification of various prime items of AHE to their applicable allowance lists, discussed within section VI, paragraph B, 2, affect the TYCOM and the cognizant shipyard to the same extent as it does the ship. Neither the TYCOM nor the shipyard are able to distinguish between NAVAIR cognizant AHE listed on the COSAL and NAVSEA cognizant OHE listed on NAVSEAINST 10490.2, "Portable Ordnance Handling Equipment Allowance for AAW (Anti-Aircraft Warfare) and ASW (Anti-Submarine Warfare) Ships." Furthermore, neither the TYCOM nor the shipyard appear to understand the responsibilities of NAVAIRSYSCOM

in providing initial ship's outfitting allowances as separate to providing AHE related to a SHIPALT performed on an existing CV.

(b) In the past, the acquisition of magazine handling equipment was the sole responsibility of NAVSHIPS and the involved shipyard responsible for initial outfitting. However, with respect to air-launched weapons handling carriers and strongbacks, this task was transferred to NAVAIRSYSCOM by mutual agreement between NAVSHIPS and NAVAIR. (The reason for this decision is not known but is believed to be due to the situation that all such AHE was not in the ADMRL and the SPCC had not yet prepared the applicable AELs.).

(c) As a result, the Naval Air Engineering Center, Ground Support Equipment Department, under AIRTASK A5345344/2003/3534430051, was assigned the job of procuring and providing the initial outfitting requirement of air-launched weapons handling carriers and strongbacks for Nimitz Class CVs. (The Nimitz Class includes the USS Nimitz (CVN-68), USS Eisenhower (CVN-69), and the USS Vinson (CVN-70).) The items to be furnished were in support of the Standard Arm, Walleye, Phoenix, Shrike, AQM-37 Target, the F-14 Weapons Rail, and items not listed in the ADMRL/IMRL. The procurement and issuance of any of this AHE has not presented a problem, per se, to NAEC.

(d) Unfortunately, the aforementioned initial outfitting procedure represented a departure in established NAVSHIPS operating procedure. This situation caused both the shipyard and the TYCOM to erroneously believe that NAVAIRSYSCOM had thus assumed complete responsibility for ordering and issuing all beams, carriers, strongbacks, slings, C-Grabs, and other portable handling devices employed within the magazine spaces aboard a CV.

(e) Ever since the USS Nimitz (CVN-68) had been outfitted, COMNAVAIRLANT and the naval shipyard at Norfolk have been submitting their AHE requirements, via message request to NAVAIR, in support of SHIPALTS performed on existing CVs. In turn, NAVAIR has been assigning the action to NAEC/GSED. Therefore, NAEC/GSED has been acting for the shipyard in procuring and coordinating the procurement of both NAVSEA and NAVAIR items of portable Armament/Ordnance Handling Equipment in support of SHIPALTS. This has not presented any particular administrative burdens for NAEC/GSED; however, the situation serves to indicate the need for improved management control over all AHE/OHE used by naval air activities, irrespective of System Command cognizance.

(2) Redistribution of AHE

(a) A related situation affects the problems of redistribution of AHE assets between one TYCOM and another. There are a considerable number of AHE end-items which, by being listed on the Consolidated Fleet Controlled Material List, are controlled entirely by the cognizant Type Commander, i.e. COMNAVAIRLANT or COMNAVAIRPAC. "Fleet Controlled Material" is assigned under the reporting, requisitioning, rationing, and/or issuance control of the Air Type Commander or his designated controlling agents.

(b) Since the end-items so listed are neither periodically reported to the ASO nor to other TYCOMS, the items of AHE supplied to an activity in excess of its actual requirements are sometimes not known. In effect, items held in surplus cannot be redistributed via the same management process to activities reporting a shortage of the same end-items.

VII. RECOMMENDATIONS

In view of the information presented in section VI, which is backed by the data that appears in Appendices K, L, M, and N, the following recommendations are offered:

A. All terms relating to explosive ordnance handling equipment, such as Ordnance Handling Equipment (OHE), Armament Handling Equipment (AHE), Armament Support Equipment (ASE), Weapons Handling Equipment (WHE), Materials Handling Equipment (MHE), and Ordnance Handling Vehicles (OHV) should be properly defined within an OPNAV Instruction addressing weapons handling operations. Although the functions performed by this equipment are similar and the terms might be used symonymously by some, each is unique and relates to specific pieces of equipment that comes under the cognizance of each of the various hardware Systems Commands. Since these distinctions do exist, it is recommended that OPNAV address them in that light in their definition, much the same as it has been done in this report. Further, AHE should be defined as GSE within OPNAVINST 4790.2A, Volume II, Chapter 2, paragraph 217.

B. Replace the current Systems Command oriented management approach with one that uses a Functional Description Fleet Management System. The functional description system should apply only to Armament/Weapons Support Equipment within selected categories and should only be employed within the naval aviation community.

C. Establish the following definitive "Functional Description Categories" of Armament/Weapons Support Equipment to facilitate adoption of the recommended Functional Description Fleet Management System:

1. Armament/Weapons GSE

a. Category I. Armament Handling GSE: Specialized aircraft ground support equipment specifically intended to provide direct or indirect support to the aircraft. This category shall include both PGSE and CGSE used to transport, handle, load, and download airborne armament, sonobuoys, and other ordnance related commodities. This equipment includes all hoisting bars, skids, skids adapters, bomb hoists, hoisting bands, SHOLS adapters, bomb trailers, weapons loaders, bomb trucks (non-self-powered), and other armament GSE. Most equipment is currently listed in the Application Data Material Readiness List.

b. Category II. Portable Ordnance Handling GSE: This includes both peculiar and common ordnance handling equipment used for canning, decanning, and magazine handling of airborne ordnance and weapons components. The equipment includes all hoisting beams, weapons carriers, strongbacks, handlift trucks, handling bands, and slings. This category shall also include aviation armament tools, gauges, jigs, alignment bars, bomb assembly tables, maintenance stands, bore sights, and other equipment. It includes both NAVAIR and NAVSEA cognizant items listed both in the COSAL and the ADMRL.

c. Category III. Packaging GSE: This includes containers, pallets, Fleet Issue Unit Loads (FIULs), and associated ancillary equipment. Both NAVSEA and NAVAIR are cognizant agencies.

d. Category IV. Armament Checkout/Test GSE: This includes electrical/electronic armament testing and checkout equipment under the cognizance of both NAVSEA and NAVAIR.

2. Weapons/Logistics Support Equipment.

a. Category V. Ship Loading/Underway Replenishment Equipment: This includes slings, VERTREP pole pendants, spreader bars, beams, missile transfer dollies, etc. employed during ships loading/offloading evolutions of explosive ordnance commodities and is allowed to auxiliary ships., i.e. AE, AOE, AOR, etc. All of this equipment is under the cognizance of NAVSEA.

b. Category VI. Installed Shipboard/Shore Based Equipment: Mechanical dunnaging, C-grabs, bi-rail/mono-rail hoists, tie-downs, davits, bomb elevators, conveyors, and other fixed or shipyard provided ordnance handling equipment. All equipment is under cognizance of NAVSEA.

c. Category VII. Materials Handling Equipment (MHE): This category includes forklift trucks, Raymond Electric Forklifts, warehouse tractors, pallet trucks, etc. All of this equipment is under the cognizance of NAVSUP.

d. Category VIII. Ordnance Handling Vehicles (OHV): This includes automotive trucks, i.e. van, flatbed, and panel, and motorized bomb trucks, etc., approved for explosive ordnance transportation and handling. All of this equipment is under cognizance of NAVFAC. (Refer to Figure 7 for an illustration of the above recommended categories.)

D. Combine categories I, II, III, and IV of Armament/Weapons GSE under a consolidated fleet management system within the naval aviation community. This fleet Functional Description Management System shall encompass all functions such as maintenance, allowancing documents, and inventory control.

E. Amend Chapter 2 and 14, Volume II of OPNAVINST 4790.2A (NAMP) and AD 901, Volume II (Management and Responsibility Cognizance List) to reflect new classifications and concepts relating to the Fleet level management of Categories I, II, III, and IV, Armament/Weapons GSE. The currently employed terms such as "ordnance equipment" and "armament and related GSE" used within many official documents are not considered specific enough to ensure complete understanding.

F. Changes to the Fleet level management of Categories V, VI, VII, and VIII of Weapons/Logistics Support Equipment is not recommended. However, it will be necessary to also define these terms in order that all such equipment is not construed by Fleet users to be included within Categories I through IV, Armament/Weapons GSE.

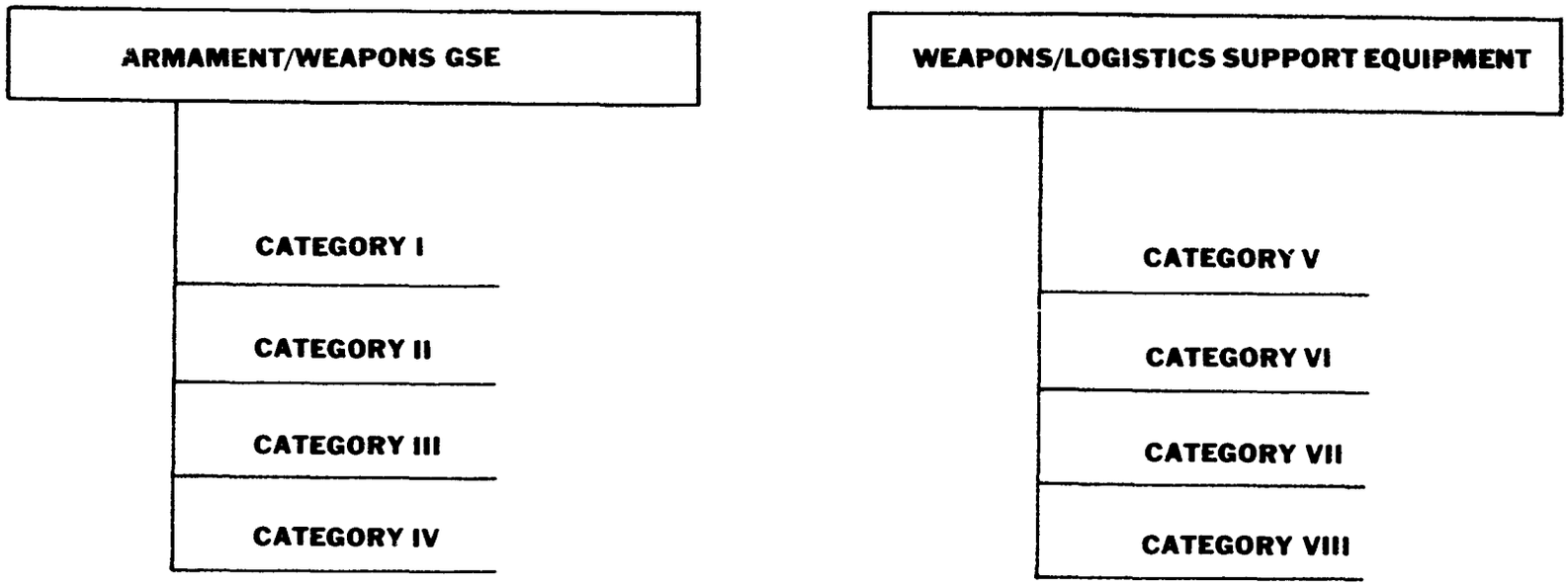

FIGURE 7. ARMAMENT/WEAPONS SUPPORT EQUIPMENT
FUNCTIONAL DESCRIPTION — FLEET MANAGEMENT SYSTEM

G. NAVAIR Instruction 4420.1C, NAVAIRSYSCOM AMMRL Program, should be modified and amended in its design to permit a custodial assignment to the Weapons Department facility for AHE end-items described herein as Categories II and IV. This would involve the subsequent modification of AIMD custodial assignment on some AHE end-items to the Weapons Department and the placement of many currently AEL/COSAL listed AHE end-items in the Weapons Department IMRL (see recommendations O and P).

H. Develop new (ADMRL) application data listings which will permit the computation of AHE end-item allowances for shore and shipboard aviation activities on factors other than aircraft assigned. The criterion for establishing this new application data should be based on factors germane to weapons handling applications, i.e. type ship, IRRP capability, number/type of magazine compartments, available inert storage space, operational mission, etc., rather than aircraft supported. Operational mission factors may encompass parameters such as aircraft supported and applicable ordnance load lists, where required. The new ADMRL should be configured to appropriately correspond to the existing computerized basis-of-issue (10-column spread) already contained within the ADMRL Program. The use of special allocation allowancing procedures; i.e. "AN" allowances, is considered neither appropriate nor desirable.

I. Supplement the existing "OL" series list codes to cover all major weapons systems corresponding to the applicable ordnance load list. For example:

1. OL-100 Series List Codes Applicable to Missile GSE
   OL-100-0: Bullpup
   OL-106-0: Shrike . . . etc., (existing series).

2. OL-200 Series List Codes Applicable to Gun GSE
   OL-201: MK 4 Mod 0 20mm Gun Pod
   OL-203: M61A1 20mm Gun . . . etc., (existing series).

3. OL-A00 Series List Code Applicable to Rockets
   OL-A01 2.75 FFAR
   OL-A02 5.0 FFAR (ZUNI) Mks 40 & 41 . . . etc.

4. OL-B00 Series List Codes Applicable to Biological & Chemical Warfare
   OL-B01 Bomb GB Fill MK 38
   OL-B02 Bomb CB Fill Mk 94 Mod 0 . . . etc.

5. OL-C00 Series List Codes Applicable to Eye Weapons
   OL-C01 Rockeye I
   OL-C02 Rockeye II . . . etc.

6. OL-D00 Series List Codes Applicable to Fire Bombs
   OL-D01 Mk 77 Mod 1 500 lb.
   OL-D02 Mk 79 Mod 1 1000 lb. . . . etc.

7. OL-E00 Series List Codes Applicable to Low Drag Bombs
   OL-E01 MK 82 500 lb.
   OL-E02 MK 83 1000 lb. . . . etc.

8. OL-F00 Series List Codes Applicable to Mines
   OL-F01 MK 55
   OL-F02 MK 56 . . . etc.

9. OL-G00 Series List Codes Applicable to Torpedoes
   OL-G01 MK 44 Mod 1
   OL-G02 MK 46 Mod 1 . . . etc.

J. Establish a new list code series for AHE that will provide application source data to print out a separate and complete Weapons Department allowance (the CORAL as defined in section VII, paragraph 0) for aviation activities afloat and ashore. For example: The following list codes could be employed since they relate to the activity in lieu of the aircraft assigned:

1. Carrier (CV) Hull Numbers:
   WD 034:* USS Oriskany
   WD 041: USS Midway
   WD 042: USS Franklin D. Roosevelt
   WD 043: USS Coral Sea
   WD 059: USS Forrestal
   WD 060: USS Saratoga
   WD 061: USS . . . etc.

2. NAS/NAF/NAVSTA Shore Activity Numbers:
   WD A01: NAS Alameda
   WD A02: NAS Albany
   WD A03: NAS Bermuda
   WD A04: NAS Barbers Point
   WD A05: NAS Cubi Point
   WD A06: NAS Cecil Field
   WD A07: NAS . . . etc.

3. Non-Aviation Shore Activities:
   WD X01: NAWF Machrihanish
   WD X02: NWS Yorktown
   WD X03: NWS Concord
   WD X04: NWS Seal Beach
   WD X05: NWS . . . etc.

4. Amphibious Assault Ships (LPH)
   WD Y02: Iwo Jima
   WD Y03: Okinawa

5. Landing Helicopter Assault (LHA)
   WD Z01: Tarawa
   WD Z02: Saipan 40

*The choice of OL number selected is not especially significant as long as there is no duplication.

6. Air-Capable (Formally Non-Aviation) Ships:
   WD 963: USS Spruance
   WD 964: USS . . . etc.

K. Expand and intensify the SPCC's current program to backfit existing AEL/COSAL allowances of GSE end-items related to weapons systems to include all AHE end-items. In order to preserve the integrity of the AEL/COSAL allowance for some non-aviation activities not possessing an IMRL, allowances of AHE for aviation activities should be reduced to zero once these items are reflected in the Weapons Department, AIMD, or squadron allowance list.

L. Most Weapons Handling Equipment used by aviation ship/shore activities should be placed within the ADMRL/IMRL Program irrespective of command cognizance. This would include all Armament/Weapons Support Equipment classified as Categories I, II, and IV. Some Category VII equipment may be included if the equipment is to be maintained by the AIMD.

M. Amend the present OL100 List Code series to include assignment for Standard Arm (AGM-78), Harpoon (AGM-84), Phoenix (AIM-78), Harm (AGM-88), and Target Missile (AGM-37A) in order that the existing capacity of the ADMRL can be used where applicable. (This has already been accomplished by NAEC ltr. 92721/142; WG;mg 13800 dtd 30 July 1976. See Appendix O.)

N. Delete all aviation ships (CV, LPH, LHA) and shore activities from all involved NAVSEAINST 10490.X (series) documents. This may be accomplished once all Category I, II, and IV Armament/Weapons Support Equipment is placed within the ADMRL/IMRL Program. This action should not cancel those important NAVSEA Instructions, but would make better use of them by providing OHE listings in the AEL/COSAL for all nonaviation activities. NAVAIR AHE may continue to be listed within the NAVSEA 10490.X (series) Instruction; however, all AHE so listed should be used in support of nonaviation weapons; i.e. AAW/ASW, surface launched, and sub-surface launched weapons. All AHE listed on the NAVSEA 10490.X (series) Instruction should require in-use inventory reporting to the ICP.

O. Provide Weapons Departments aboard naval air activities with one consolidated allowance list which contains a complete listing of all their required Armament/Weapons Support Equipment. The resultant consolidated allowance list may be called the Consolidated Ordnance Requirements Allowance List (CORAL). The CORAL should be a component of the ADMRL/IMRL Program. Management of the CORAL should be conducted by NAVAIR and its field activities acting in close liaison with NAVSEA and its field activities. The CORAL should include those end-items of Armament/Weapons Support Equipment described as Categories I, II and III. Category I should be included on a sub-custody basis from the issuing AIMD and Categories II and IV included under Weapons Department custody.

The CORAL may further be expanded to include other Categories, if considered necessary. For example, some CONREP/VERTREP Category V Weapons/Logistics Support Equipment could be included, if it appears more feasible to include a few OHE end-items on the CORAL rather than to list the activity on the NAVSEA 10490.X (series) Instruction. The CORAL will eventually include all NAVSEA OHE currently listed in NAVSEAINST 10490.2 and NAVSEAINST 10490.7. Other NAVAIR AHE listed in the AEL/COSAL

and end-items currently not listed in any allowancing document, should also be included in the CORAL if they fall within the definition of Category II and IV Armament/ Weapons Support Equipment. The proposed Weapons Department allowance system is shown in Figure 8.

P. Continue listing all AHE classified as Category I within the IMRL, prepositioned to either the using Weapons Department or squadron, as applicable. Weapons Department equipment should also be contained within the CORAL as indicated in paragraph O, above.

Q. Issue a single publication (OPNAV or NAVAIR/NAVSEA joint) similar to OPNAVINST 4790.2A (NAMP) that will contain all technical data, procedures, forms, reports, etc. pertaining to aviation ordnance, Armament/Weapons Support Equipment, and the overall functional responsibilities of aviation Weapons Departments aboard ship and ashore. A proposed manual, currently being prepared, called the Naval Airborne Weapons Program (NAWMP) should address specific responsibilities for Weapons Departments afloat and ashore. It should utilize the Functional Description Fleet Management System, as defined herein, to differentiate between that equipment which supports the weapon system and that equipment which supports the activity or facility.

R. Designate the Weapons Department as a limited I-level maintenance activity over all equipment classified as Categories II, and III. The Weapons Department should be designated as a user of all other categories of equipment and have maintenance responsibilities consistant with O-level activities. All I-level maintenance performed shall be fully documented and reported on OPNAV Form 4790/60.

S. Adopt the following specific responsibilities governing the operation of the Weapons Department and include them within a single publication addressing Weapons Department operations:

1. The Department will be considered as a using activity, similar to a squadron, and will obtain its required Category 1 AHE on a sub-custody basis from the supporting AIMD.

2. The department's functional maintenance responsibility on Category I, VII, and VIII equipment should be limited to preoperational inspections, servicing, cleaning, safety checks, and other O-level maintenance. All functions performed shall be documented via OPNAV Form 4790/42.

3. The Department should be responsible for O-level maintenance (mechanical only) of the bomb elevators, mono-rail hoists, bomb assembly tables, magazine equipment, and other fixed shipboard installations (Category VI equipment).

4. The Department will be responsible for periodic inspections of the magazines and magazine sprinkler systems.

5. The Department will assign, via TAD, qualified personnel to the AIMD 900 WC in order to accomplish periodic maintenance and inventory control of Category 1 AHE. This figure may be increased at the discretion of the Commanding Officer of the activity based on existing workloads of the Weapons Department and the AIMD.

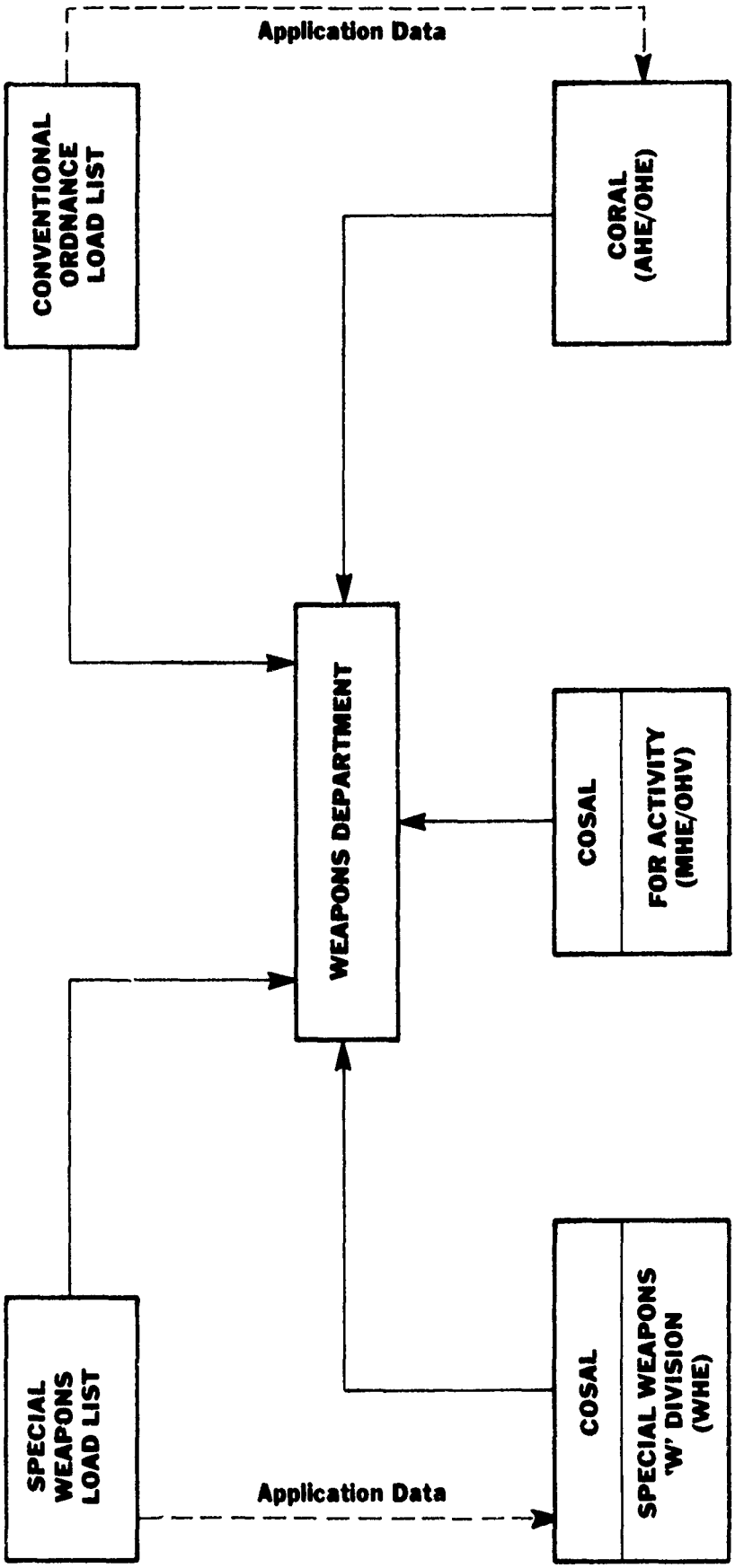

FIGURE 8. PROPOSED WEAPONS DEPARTMENT ALLOWANCES

6. The Department will be responsible for the inspection, load testing, and certification of Portable Ordnance Handling GSE (Category II) and will be assisted by the AIMD.

T. Amend the Naval Aviation Maintenance Program (OPNAVINST 4790.2A) to include specific maintenance responsibilities by maintenance level for all Armament/Weapons Support Equipment (Categories I, II, III, and IV.). A general policy to be covered shall include O-level maintenance tasks to be performed by the Weapons Department or squadron users, and I-level by the AIMD 900 WC, AIMD 710 WC, Weapons Department, Engineering Department, and Public Works Department.

U. The following responsibilities should be included within pertinent amendments to OPNAVINST 4790.2A:

1. AIMD General Responsibilities over AHE.

a. The AIMD shall have I-level maintenance responsibility for all Category I & IV Armament/Weapons Support Equipment.

b. The AIMD shall be responsible for assisting the Weapons Department in accomplishing the certification load testing of Portable Ordnance Handling GSE (Category II), as required by OP-5, OP-4, and other applicable instructions. In this regard, it is intended that the AIMD make its maintenance facilities available to perform all such testing as required. In the event that a test cannot be performed on board the ship, the AIMD should make arrangements to have the item tested at a shore based testing facility; i.e. shore based AIMD or a supporting Naval Weapons Station.

c. The AIMD shall be responsible for the preparation and submission of the In-Use Asset Report for all AIMD IMRL and Weapons CORAL GSE end-items. This requirement does not relieve the Weapons Department of the responsibility of conducting a timely and accurate inventory of Category II and VI Armament/Weapons Support Equipment.

2. AIMD Specific Responsibilities over AHE by Work Center.

a. AIMD 900 WC. The functional responsibilities of the 900 WC shall include the maintenance, test, repair, and minor modification of all Armament Handling GSE described as Category I. This equipment shall include all specialized aircraft GSE specifically included to provide direct or indirect support to the aircraft. This category shall include both PGSE and CGSE used to transport, handle, load, and download airborne ordnance, sonobuoys, and other ordnance related commodities. With the exception of the M61A1 Gun System, Linkless Ammunition Loading System, and the SHOLS adapters and slings, all Category I equipment should be maintained by the 900 Work Center.

b. AIMD 710 WC. The functional responsibilities of the 710 WC shall include the maintenance, testing, repair, and minor modification of all aircraft armament equipment, which is or can be attached either permamently or temporarily to an aircraft, and the use of such equipment allows for the suspending, releasing, ejecting, and/or arming of explosive ordnance stores. In addition, the M61A1 Gun System, the Linkless Ammunition Loading System and its associated equipment, and the SHOLS adapters

and slings, shall be maintained by the 710 Work Center. (See Table 2 for a summary of maintenance recommendations).

V. NAVAIR shall sponsor the development of a viable inspection, load test, maintenance, and certification program in support of all Portable Ordnance Handling GSE (Category II) within the naval aviation community consisting of the following sub-tasks:

1. Develop one technical publication covering the conduct of inspections, load testing, maintenance, and certification for all Portable Ordnance Handling GSE. This may be accomplished by incorporating all NAVAIR cognizant portable ordnance handling devices into an existing publication, "Periodic Testing Arrangements for Ordnance Handling Equipment (NAVORD OD 44941)". This manual may then be redesignated as a NAVAIR/NAVSEA Technical Publication. In its present format, NAVORD OD 44941 already provides a detailed functional description of the applicable testing methods, operating procedures, maintenance requirements, and various testing arrangements for conducting load test certification of portable ordnance handling equipment under the cognizance of NAVSEA. It should be noted that the basic criteria for conducting load testing on NAVSEA portable ordnance handling equipment, in most cases, is similar to that required for NAVAIR equipment.

2. Develop an Armament Handling Equipment Test Stand, test fixtures, and the related operational procedures required to support the conduct of periodic load testing, inspections, and certification of Portable Ordnance Handling GSE at I-Level maintenance activities;

3. Acting in direct liaison with NAVSEA field activities, NAVSEA-SUPCENLANT and NAVSEASUPCENPAC should establish a total of eight test sites (three located on the east coast, three on the west coast, one at Cubi Point, and one in the Mediterranean area) and have these designated test sights equipped with an AHE Test Stand, instructions, and personnel especially trained in the conduct of periodic load testing. Site locations at shore based AIMDs and/or supporting Naval Weapons Stations are recommended.

W. Amend NAVSEA OP-5 to be more definitive in describing the testing requirements for items in storage or otherwise seldom used. For example, change the statement "...ordnance lifting equipment used ashore shall be tested at least once every six months. Ordnance lifting equipment used aboard ship shall be tested at least every 18 months..." to read as follows, "...prior to placing ordnance lifting equipment in operation, ensure that it first has been tested/and marked as required herein." This will preclude the requirement to constantly test items which are being held in a storage condition.

X. NAVSEASYSCOM should modify the overall periodic load testing requirement to reflect the reduction of testing shore based Portable Ordnance Handling GSE (Category II) from six months to annually. This will result in considerable cost savings throughout the Navy operating forces.

Y. NAVSEA should cancel NAVSEA OP-3347 and transfer all applicable information into NAVSEA OP-4 for shipboard activities.

ARMAMENT/WEAPONS SUPPORT EQUIPMENT MAINTENANCE RESPONSIBILITY CHART SHIP/SHORE BY CATEGORY NO.

		LOAD TEST	INVENTORY	"I" LEVEL MAINT	"O" LEVEL MAINT
SHIP	WEAPONS DEPT	II†	II, III, IV	II, III	I, II, III, IV, VI, VII
	SQUADRON				I
	AIMD (900WC)	I, II	I	I	
	AIMD (700WC)	II		I*	
	AIMD (600WC)			IV	
	SUPPLY DEPT		VII		
	ENGINEERING	VII	VI	VI, VII	
	SHIPYARD	VI			
SHORE	ORDNANCE DEPT/UNIT	II†	II, III, IV, VII, VIII	II, III	I, II, III, IV, VI, VII, VIII
	SQUADRON				I, IV
	AIMD (900WC)	I, II	I	I	
	AIMD (700WC)	II		I*	
	AIMD (600WC)			IV	
	SUPPLY DEPT		VII		
	PUBLIC WORKS DEPT	I, VI, VII, VIII	VI, VIII‡	VI, VII, VIII	
	NWS	II, V	V		

† Accomplished by AIMD
‡ Non-dedicated Only
* LALS and SHOLS Only

TABLE 2

Z. Under the Functional Description Fleet Management System, in-use asset inventory reporting should include all Weapons/Armament Support Equipment with the possible exception of Categories V and VI equipment. Category V is not normally held by aviation activities, and Category VI is installed equipment and therefore should not require inventory accountability. The proposed inventory reporting system is shown in Figure 9 and is delineated as follows:

1. Category I and IV equipment shall be reported by the custodian AIMD, even though the equipment is held on sub-custody by the Weapons Department or the Squadron. However, equipment so held shall be inventoried by the sub-custodian and reported in writing to the custodian AIMD.

2. Categories II and IV equipment held under full custody by the Weapons Department should be both inventoried and reported by the Weapons Department. However, as with Category I equipment, all inventories should be reported in writing to the AIMD. It is intended that the AIMD continue to exercise overall responsibility for preparation and submission of the final inventory report.

3. Category III equipment is inventoried with the applicable weapon.

4. Categories VII and VIII equipment shall be inventoried by the Weapons Department and reported by the ship/station Supply Department in accordance with SPCC Instructions.

AA. Train Weapons Department personnel in the area of in-use asset reporting methodology. The need for efficient centralized control of the consolidated inventory report is recognized; therefore, AIMD and the NAVAIRSYSCOMREPs should continue to exercise overall responsibility and administration for the consolidated report.

AB. Devise a more convenient means of enabling non-aviation activities to report quantities of all NAVAIR AHE to the ICP. A message format may be acceptable pending the results of the establishment of a formalized system currently under study by the SPCC.

AC. No major discrepancies were found in the area of spare parts procurement that should require any modification to the existing supply policies and procedures. The availability of spares is often directly related to the number of end items being reported via the Consolidated In-Use Asset Report. Improvements cited in the report to prime end-items should directly affect the availability of spare parts. Recommended changes to the management system in maintenance management and inventory management previously discussed will undoubtedly result in measureable improvements to in-use asset reporting.

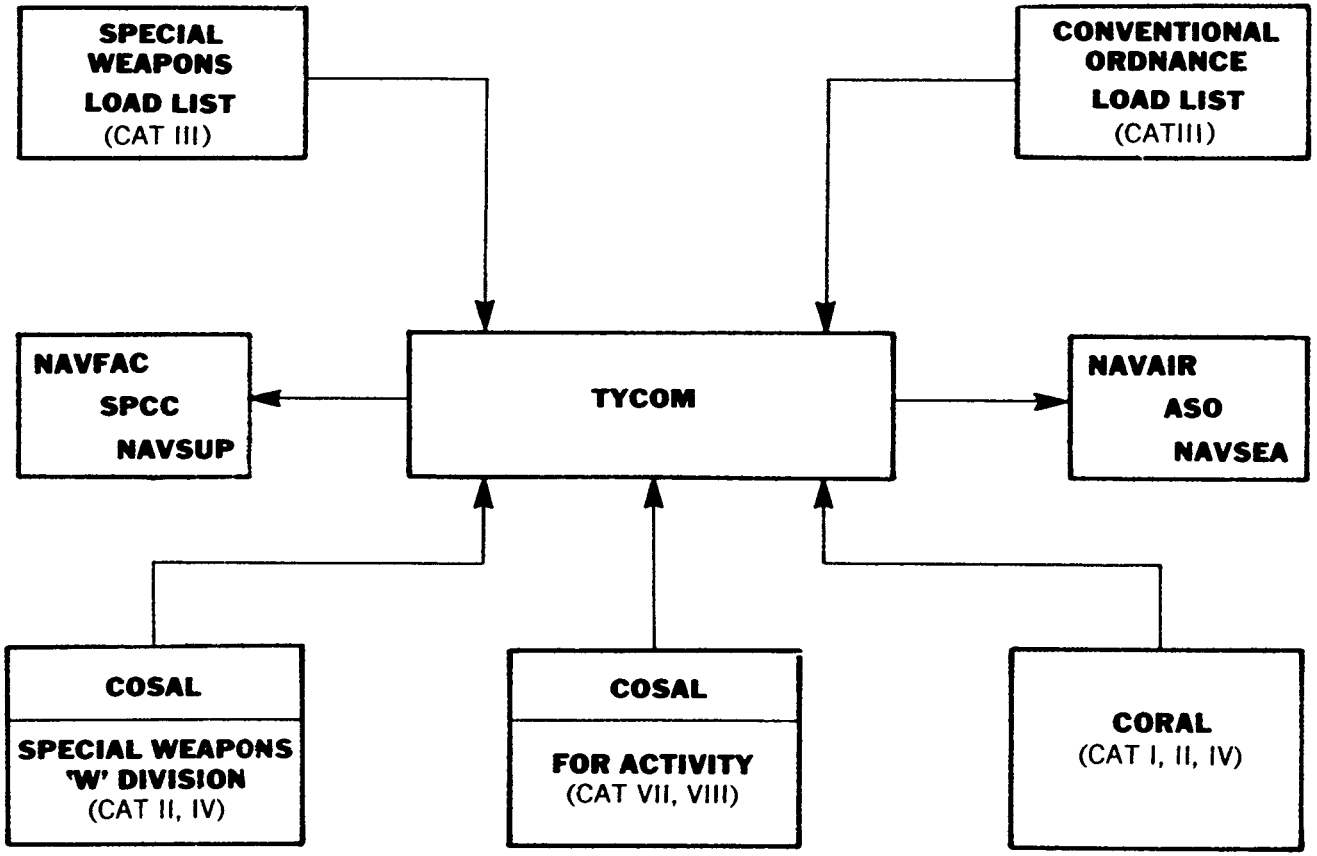

FIGURE 9. PROPOSED INVENTORY REPORTING

AD. It is necessary that the ACCs present at the TYCOM have access to data concerning all the available AHE assets. Under the Functional Description Fleet Management System, the ACC should have a much greater control of the availability of Categories I, II, III, and IV Armament/ Weapons Support Equipment. This would correct most deficiencies in the area of redistribution of AHE assets since the shipyard will only have to be responsible for Category VI Weapons/Logistic Support Equipment. It is necessary, however, that accurate and timely in-asset reports be made each time AHE is changed from one activity to another. This is not being done at present.

VIII

VIII. REFERENCES

A. NAVAIRINST 4420.1C, "Naval Air Systems Command AMMRL (Aircraft Maintenance Material Readiness List) Program."

B. NAVSEAINST 10490.2, "Portable Ordnance Handling Equipment for AAW and ASW Ships."

C. NAVSEAINST 10490.3, "Portable Ordnance Handling Equipment Allowance for Ammunition Ships and Combat Store Ships."

D. NAVSEAINST 10490.4, "Portable Ordnance Handling Equipment Allowance for SMS Shore Stations and Supporting Activities."

E. NAVSEAINST 10490.5, "Portable Ordnance Handling Equipment Allowance for Shore Stations and Supporting Activities Having Anti-Submarine Warfare (ASW) Support Capabilities."

F. NAVSEAINST 10490.6, "Multi-Purpose Portable Ordnance Handling Equipment Allowance for Naval Shore Activities."

G. NAVSEAINST 10490.7, "Portable Ordnance Handling Equipment Allowance for Shore Stations and Training Activities for Support of NAVSEA/ NAVAIR Weapons."

H. NAVSEA OP-4, "Ammunition and Explosive Afloat (Safety Regulations)," Volume 1.

I. NAVSEA OP-5, "Ammunition and Explosives Ashore (Safety Regulations for Handling, Storing, Production, Renovation, and Shipping)," Volume 1.

J. NAVSEA OP-3347, "US Navy Ordnance Safety Precautions."

K. OPNAVINST 4790.2A, "Naval Aviation Maintenance Program."

L. Special Weapons Operations Publication (SWOP H-1).

XI

APPENDIX A - LIST OF ACTIVITIES VISITED

APPENDIX: A.

Activities Surveyed

1. COMMNAVAIRLANT
2. COMMNAVAIRPAC
3. NAVSEACENLANT
4. NAVSEACENPAC
5. USS J. F. Kennedy (CV67)
6. USS Constellation (CV64)
7. NAS Oceana
8. NAS Miramar
9. MCAS Yuma
10. ASO, Philadelphia, PA
11. SPCC, Mechanicsberg, PA
12. NWHC, NWS Earle
13. PACMISTESTCEN
14. NARF North Island

APPENDIX B - SAMPLE QUESTIONNAIRE

TASK 1: QUESTIONNAIRE

A. MANAGEMENT:

(1) What equipment is under the control of AIMD, weapons and squadron control?

(2) What equipment is sub-custodied from another department and which department?

(3) What type sub-custody control is maintained?

(4) Who determines actual requirements?

(5) Are there responsibilities assigned that should be assigned to another department or division? Explain.

B. INVENTORY CONTROL OF IN-USE ASSETS:

(1) What method is used to insure proper inventory control?

(2) Is there in effect a positive inventory control reporting system and to whom is it made?

(3) Is adequate lead time provided to TYCOMs when additional or replacement equipment is required to meet operational commitments?

C. MAINTENANCE RESPONSIBILITY:

(1) What level of maintenance is accomplished by department division or squadron?

(2) What type equipment in your department division squadron, is I Level Maintenance performed on? O Level Maintenance performed on?

(3) Is your maintenance performed in accordance with 4790.2A?

(4) Does the qualification of your maintenance personnel meet your full requirements?

(5) What percentage of your total maintenance actions must be accomplished by another department or division?

D. ALLOWANCE/ALLOCATIONS:

(1) Does present on-hand equipment meet your needs? If not, what areas have the greatest NORS, NORM rate or equipment shortages?

(2) Is adequate equipment authorized to meet all operating conditions?

(3) Has allowance been tailored to individual requirements?

E. MANNING AND TRAINING:

(1) Are the personnel now assigned adequate to meet your requirements under present conditions?

(2) Are these personnel adequately trained?

(3) Are there adequate schools or training available to meet your total requirement?

(4) Has Manning or Training had an effect on meeting operational commitments? If yes, in what way?

F. SUPPLY SUPPORT:

(1) Has the activity been out-fitted with ample spares and bit and piece support?

(2) What percent of the COSAL is on hand to support your needs?

(3) What is the normal AWP time?

(4) What is the maximum time any item of equipment has been AWP?

(5) Is follow-up action initiated on outstanding requisitions?

(6) Does the equipment assigned have IOLs and OLSP?

(7) Are testers and other equipment calibrated or certified as required?

G. CONFIGURATION CONTROL:

(1) Are configuration changes documented IAW with current directives?

(2) Are changes incorporated at designated level of maintenance? If not, why not?

H. SPACE:

(1) Is there ample space for storage of equipment when not in use?

(2) Is there space allocated to adequately perform required maintenance?

(3) Does the present build-up/assembly space effect the quantity of equipment required? What effect does space play on equipment allowances?

I. FACILITIES:

(1) Are present facilities adequate? If not, what changes are required?

J. TECHNICAL PUBLICATIONS:

(1) Does the present allocation of technical publications meet the needs?

(2) Are technical publications current? If not, why not?

(3) What percent of total requirement of technical publications are missing?

(4) Is there a technical publications custodian assigned within the department/division?

(5) What Systems Command has cognizance of these technical publications? Indicate quantity by Command.

NAVSEA _____

NAVAIR _____

OTHER _____

APPENDIX C - LIST OF NON-AMMRL WHE AND TOOLS

NON-AMMRL WEAPONS HANDLING EQUIPMENT & TOOLS

USED B' NAVAL AIR ACTIVITIES

SHIPBOARD ONL

WEAPONS HANDLING EQUIPMENT

NOMENCLATURE	NSN	ALLOW	COG
MINE SLING MK-101 MOD 0	4N-4925-00-118-5845	2	NAVSEA
CONTAINERS LIFTING SLING MK-109 MOD 0	1A-1450-00-169-0599	6	"
WEAPONS CARRIER MK-55 MOD 0	4N-1350-00-238-6169	6	"
HOISTING BEAM MK-15 MOD 0	8T-1450-00-229-7012	2	"
PALLET SLING MK-93 MOD 0	4N-4930-00-089-8025	6	"
HOISTING BEAM MK-24 MOD 0	1A-1420-00-003-1293	5	"
CRADLE MK-21 MOD 0	1A-8140-00-443-1386	1	"
MISSILE HANDLING BAND MK-79 MOD 1	8T-1450-00-937-2445	8	"
CONTAINER LIFTING SLING MK-77 MOD 3	1A-1450-00-415-1737	8	"
ADAPTER, CLOSURE	1A-1450-00-840-3088	4	"
HAND LIFT TRUCK MK-45 MOD 0/1	1A-1450-00-415-1738	12	"
HAND LIFT TRUCK ADAPTER MK-26 MOD 2	4N-3920-00-004-9160	4	"
HAND LIFT TRUCK ADAPTER MK-28 MOD 1	4N-4925-00-878-4371	4	"
HAND LIFT TRUCK ADAPTER MK-93 MOD 0	1A-4925-00-499-3328	4	"
ADAPTER SKID MK-111 MOD 0	4N-4925-LL-HDW-5272	2	"
HOOK ADAPTER MK-91 MOD 0	4N-1450-00-250-8822	6	"
TORPEDO SLING MK-102 MOD 0	4N-4925-00-118-5846	2	"
TORPEDO SLING MK-106 MOD 0	4N-4925-00-923-9089	4	"
SLING WEAPONS HANDLING MK-99	1A-1350-00-477-8853	6	"
PHOENIX LIFTING BEAM AR67/11			NAVAIR
SLING HLU-209 E	1A-1450-00-723-4117	2	"
BEAM HLU-210/E	1A-1450-00-118-5846	2	"
BEAM HLU-214/E	1A-1450-00-151-4349	2	"
BEAM HLU-253 E		2	"
BEAM MHU-129/E	1A-1450-00-113-6873	3	"
SIDEWINDER STRONGBACK ADAPTER		2	"
SPARROW HANDLING STRONGBACK		2	"
BEAM. ADAPTER ADU-353/E	1A-1450-00-151-4348	6	"
CARRIER MK-4 MOD 0	1A-4925-00-622-0427	12	"
CARRIER MK-6 MOD 0	1A-4925-00-389-0893	1	"
SLING MK-8 MOD 0	1A-1730-00-963-5881	6	"
CARRIER MK-12 MOD 0		1	"
BAND MK-17 MOD			"
SLING MK-25 MOD 0	1A-4925-00-389-0903	2	"
CARRIER MK-41 MOD 0		1	"
CARRIER, MK-43 MOD 1	1A-1450-00-165-4564	4	"
CARRIER, MK-47 MOD 0	1A-1398-00-016-3784	1	"
CARRIER, MK-5. MOD 1	4A-1398-00-190-6719	6	"
SLING, MK-81 MOD 0		1	"
STRONGBACK HLU-255/E	6RX-1730-00-123-7801	5	"
GAUGE BAR GMU-73/E	6RX-5220-01-016-1969PF	2	"
CARRIER, MK-49 MOD 1	1A-1450-LL-HDA-P056	22	"
SLING, MK-67 MOD 1		2	"
SLING, MK-68 MOD 1		2	"

NOMENCLATURE	NSN	ALLOW	COG
F-14 RAIL MAINT STAND A/E32M-4	6RX-2825-00-938-3345	2	NAVAIR
F-14 SERVICE STAND MSU-163/E	6RX-1730-01-004-1725PF	2	"
BOMB ASSEMBL TAKLE A/F32R-1	6RX-1730-00-106-7763-SX	3	"
PALLET JACK	BLUE GAINT MODEL #6000	6	"
RA MONS REACH ELECTRIC FORKLIFT	NO. 900-E4rtah-40-31-68-5	15	NAVSUP

MK-46 TORPEDO SPECIAL TOOLS

NOMENCLATURE	NSN	ALLOW	COG
WRENCH, TORQUE, SCREWDRIVER	FSN 9Q-5120-021-2041	2	NAVAIR
WRENCH, SPANNER	FSN 1A-4925-795-6100	2	"
WRENCH, TORQUE	FSN 9Q-5120-230-6380	2	"
TOOL, LOADING	FSN 1A-4925-795-5543 PN 1573836	2	"
CLAMP	FSN 1A-4925-795-5410 PN 1873931	4	"
BOLTS, HEX HEADS	FSN 9Z-5310-206-4319	4	"
NUTS	FSN 9Z-530-763-8920	4	"
LINE, NYLON (550 LBS)	MIL-C-5040 NSN 9Z-4020-00-240-2146	1 ROLL SEMI ANNUAL	"
LINE, NYLON (100 LBS)	MIL-C-5040 NSN 9Z-4020-00-240-2154	1 ROLL SEMI ANNUAL	"
TOOL, INSTALLATION	NSN 9Q-5120-00-718-7891	2	"
PLIERS, PARALLEL ACTION SAW	NSN 9Q-5120-00-224-1541	2	"

PHOENIX SPECIAL HANDLING EQUIPMENT

NOMENCLATURE	NSN	ALLOW	COG
NITORGEN CHECK & REFILL ASS	HUG-3424295	2	NAVAIR
ADAPTER ASSEMBLY	HUG 3423042	2	"
ADAPTER ASSEMBLY	HUG 089112-1	2	"
ADAPTER ASSEMBLY	HUG 089112-2	2	"
TWO STAGE PRESSURE REGULATOR	SR151-5222-GR	2	"
RADOMIC PROTECTIVE COVER		1 PER AUTHORIZED MISSILE ALLOWANCE	"
TORQUE WRENCH	A (NAVAIR 01-AIM54-2, TABLE 1-2 ITEM 5)	1	"
TORQUMETER TORQUE WRENCH	PN # TE-25-FU	1	"
STANDARD DOUBLE HEX SOCKET	F-141	4	"
HEX HEAD SCREW DRIVER	FA-4, 5A	4	"
TORQ-SET POWER DRIVER INSERT BIT	EX-170-$\frac{1}{4}$	4	"
TWO STAGE NITROGEN REGULAR	SL-(CGA)-580	2	"
HOSE (15 FT. LENGTH)	800102 B-2-4-4-180	2	"
COUPLER	53A	2	"
FORCE GAGE	L-5 (OR EQUIVALENT)		"
NIPPLE THREAD SIZE (NPT) 1/8-27	AOC	4	"
NIPPLE THREAD SIZE (NPT) $\frac{1}{4}$-27	AOC	4	"

APPENDIX D - CO, USS CONSTELLATION(CV 64) LTR, SER 05

DEPARTMENT OF THE NAVY
USS CONSTELLATION (CVA-64)
FLEET POST OFFICE
SAN FRANCISCO, 96601

IN REPLY REFER TO

CV64/HBL:pn
8011
ser 05/

From: Commanding Officer, USS CONSTELLATION (CV 64)
To: Commander Naval Air Forces, U. S. Pacific Fleet

Subj: Addition to Aviation Ordnance Handling Equipment Allowance Lists

Ref: (a) Individuel Material Readiness List (IMRL)
(b) NAVSEAINST 10490.2 dtd 25 March 1975

Encl: (1) Aviation Ordnance Handling Equipment not on Allowance List

1. References (a) and (b) provide the authority for CONSTELLATION to obtain Ordnance Handling Equipment. Areview of references (a) and (b) Ordnance Handling manuals coupled with operational experience has identified short falls which are considered necessary to provide CONSTELLATION with a full CV capability.

2. It is requested that enclosure (1) items be authorized for addition to references (a) and (b) allowance lists as appropriate.

L. F. EGGERT

Copy to:
COMCARGRU ONE

NOMENCLATURE		Recommended Quantity
Sling, lifting HLU-209/E DWG 423-220704 NSN 1450-00-723-4117	STD ARM	2
Strongback, target AQM 37A DWG 1019-390125 NSN 1730-00-967-2078	AQM-37A	1
Bomb Assy Table A/F 32k-1 PN 614910-1 NSN 1730-00-151-4107	BOMBS.	3
Carrier, Weapon MK51 MOD 1 DWG 651-AS-100 NSN 4A 1318-00-M6-6719	[illegible]	6
Carrier, Weapon MK43 MOD 1 DWG 2482995 NSN 1450-00-165-4564	BOMB	6
Beam Weapons cradle hoisting HLU-216/E DWG 616956-1 NSN 1A-1450-00-165-9595	PHOENIX	6
Beam Hoisting Guided missile MHU-129/E DWG 647-AS-100 NSN 1450-00-113-6873	PHOENIX	2
Beam Hoisting Mk24 Mod 1 Dwg #2879984	SPARROW	4
Beam, Hoisting Mk24 Mod 0 Dwg #2643825	SPARROW	4
Beam, Hoisting HLU-210/E Dwg #423-220683 NSN #1450-00-118-5846	STD ARM	2
Beam, Hoisting HLU-214/E Dwg #67A254-F1 NSN #1450-00-151-4349	STD ARM	2
Carrier, Bomb Mk4 Mod 0 Dwg #301015 NSN #4925-00-622-0427	BOMBS	12

NOMENCLATURE	Recommended Quantity
Carrier, Mine MK46 MOD 1 DWG # 2642669 NSN # 1350-00-969-1109	2
Pallet Jack Blue Gaint model 6000	6
Reach Fork Electric Raymond Electric reach Model NO. 900-E4rtaH-40-31-68-5	15
Phoenix Special Handling Equipment	
Nitrogen Check and refill Assy HUG 3424295	2
Adapter Assembly HUG 3423042	2
Adapter Assembly HUG 089112-1	2
Adapter Assembly HUG 089112-2	2
Two stage Pressure Regulator SR151-5222-GR (Victor controls Division Circle seal corpation)	2
Radomic Protestive cover	1 per authorzied missile allowance
Torque wrench (as applicable) A (NAVAIR 01-AIM54-2, TABLE 1-2 item 5	1
Torqumeter torque wrench PN # TE-25-FU Man snap on tools, INC	1
Standard Double Hex Socket F-141 Man snap on tools INC	4
Hex head Screw Driver FA-4,5A Man snap on tools INC	4
Torq-set Power driver insert bit Ex-170-1/4 Man Air industries	4

NOMENCLATURE	Recommended Quantity
Twostage nitrogen regular SL-(CGA)-580 Man Matheson GAS Products Division, will Ross INC	2
Hose (15 ft. Length) 800102 B-2-4-4-180 Man Parker Hannifin CO	2
Coupler 53A Man Parker Hannifin CO	2
Force gage L-5 (orequivalent) Man Hunter Engineering CO	1
Nipple thread size (NPT) 1/8-27 AOC Man Parker Hannifin CO	4
Nipple thread size (NPT) 1/4-27 AOC Man Parker Hannifin CO	4
Wrench, torque, screwdriver FSN 9Q-5120-021-2041	2
Wrench, spanner FSN 1A-4925-795-6100	2
Wrench, torque FSN 9Q-5120-230-6380	2
Tool, loading PN 1573836 FSN 1A-4925-795-5543	2
Clamp PN 1873931 FSN 1A-4925-795-5410	4
Bolts, hex heads FSN 9Z-5310-206-4319	4

MK 46 Torpedo special Tools

NOMENCLATURE	Recommended Quantity
MK 46 Nuts FSN 9Z-530-763-8920	4
MK 46 Line, nylon (550 LBS.) MIL-C-5040 NSN 9Z-4020-00-240-2146	1 roll semi annual
MK 46 Line, nylon (100 LBS.) MIL-C-5040 NSN 9Z-4020-00-240-2154	1 roll semi annual
MK 46 Tool, installation NSN 9Q-5120-00-718-7891	2
MK46 Pliers, PARALLEL Action JAWS NSN 9Q-5120-00-224-1541	2

APPENDIX E - CO, SPCC LTR, SER 4400, DTD 30 SEP 76

DEPARTMENT OF THE NAVY
NAVY SHIPS PARTS CONTROL CENTER
MECHANICSBURG PA. 17055

AREA CODE 717
766 - 8511 EXT 2731
AUTOVON 377 8 EXT. 2731

IN REPLY REFER TO
5501/IMH/761
4400
SEP 30 1976

From: Commanding Officer, Navy Ships Parts Control Center
To: Distribution

Subj: 6M Cog Material Management Meeting

Ref: (a) NAVAIR Washington DC 202143Z Aug 1976 (Notal)
(b) SPCC Mechanicsburg PA 020307Z Sep 1976 (Notal)

Encl: (1) Minutes of Meeting
(2) List of Attendees

1. As established by references (a) and (b), a meeting was held at SPCC on 16 September 1976 to discuss 6M cog material management and, specifically, the procedures necessary to develop and provide timely 6M cog material budgetary requirements to NAVAIR (AIR-534).

2. Enclosure (1), the minutes of the meeting, is forwarded for information or appropriate action as applicable. Enclosure (2) provides a list of attendees.

J. R. GAUNT
By direction

Distribution:
NAVAIR (AIR-417, AIR-534, AIR-534A, AIR-53412B, AIR-41711C)
NAEC (927, 92714, 92721)
ASO (SCW4-A)

MINUTES OF THE 6M COG MATERIAL MANAGEMENT MEETING HELD AT SPCC ON 16 SEPTEMBER 1976

1. The Air Division Director, LCDR J. R. Gaunt, opened the meeting with a short presentation on 6M cog management at SPCC which covered the following points:

a. The 6M cog GSE universe is currently comprised of approximately 80 items.

b. These end items are primarily cryogenics equipments, Guided Missile Test Sets and various weapons handling equipments.

c. SPCC problems are (1) lack of procedures to provide visibility of activity allowances, activity assets, condition and location of assets, planned replacement of equipment, and validation on and prioritizing of requirements, (2) lack of technical data packages to effect procurements, and (3) lack of funding.

d. Proposed solutions are (1) purify the 6M cog universe of items to eliminate overage and duplicate or superseded equipment, (2) develop procedures/agreements between NAVAIR, NAEC, SPCC and user activities covering 6M cog management needs, and (3) define SPCC, NAEC, NAVAIR in-house responsibilities.

2. A discussion was held on the possibility of expanding reporting via the AMMRL (Aircraft Maintenance Material Readiness List) Program to include all 6M cog items so that SPCC could use selective ASO generated MAC (Mechanized AMSE (Aeronautical Maintenance Support Equipment) Computation) reports in budget and procurement determinations of 6M cog GSE end items. However, it was considered that since uniform reporting of 6M cog GSE is not now in being under the AMMRL Program, specifically cryogenics equipment, a more practical immediate approach should be undertaken.

3. Accordingly, the following actions will be taken to identify budgetary and procurement requirements of 6M cog GSE end items.

a. Cryogenics

(1) NAEC (92714) will schedule a meeting in October 1976 and quarterly thereafter with SPCC, Type Commanders, and NAVAIRSYSCOMREPS to establish planned requirements/procurements of 6M cog material. NAEC will have in use asset reporting data available.

(2) NAEC (92714) will review the 6M cog universe to cancel or limit procurement of certain 6M cog items determined to be obsolete or terminal. SPCC will update data file base with "Do not procure" information or cancel NSNs as directed by NAEC.

(3) NAEC (92714) will develop Technical Procurement Packages for planned procurements of 6M cog items as established by 3.a.(1) above.

b. Test Sets, Handling Equipments, etc.

(1) NAVAIR (AIR-534A) will request NAEC (92721) to schedule a meeting in November 1976 and semi-annually thereafter with SPCC, PMTC, and NAVAIRSYSCOMREPS to establish planned procurements of 6M cog material. NAEC will have in use asset reporting data available.

(2) NAEC (92721) will review the 6M cog universe to cancel or limit procurement of certain 6M cog items determined to be obsolete or terminal. SPCC will update data file base with "Do not procure" information or cancel NSNs as directed by NAEC.

(3) NAEC (92721) will develop Technical Procurement Packages for planned procurements of 6M cog items as established by 3.b.(1) above.

4. Using the procurement requirements to be established by 3.a.(1) and 3.b.(1) above, SPCC will provide 6M cog budgetary requirements to NAVAIR (AIR-534) by the first week of January 1977.

5. SPCC will establish a MCC (Material Control Code) of "W" in the MDF (Master Data File)/PSI (Program Support Interest) file for all expendable GSE end items in accordance with NAVSUP letter 0423D/HOB of 4 February 1976. Target completion date is Mid-March 1977.

6M COG MEETING AT SPCC

LIST OF ATTENDEES

NAME	ACTIVITY	PHONE NUMBER
Joe Bower	SPCC - 5531	AV 277-2847/2745
D. L. Malloy	NAVAIR (AIR-53412B)	222-3090/91
CDR J. E. Christen	ASO (SCW4-A)	442-2538
H. O. Aburn	NAVAIR (AIR-534A)	222-3041
R. G. Good	SPCC - 552	277-2980/3546
C. D. Buscemi	SPCC - 551	277-2152/2410
M. O'Rourke	SPCC - 3473	277-2855/2038
K. Hykes	SPCC - 552	277-3963
C. G. Braknis	NAVAIR (AIR-41711C)	222-2344
F. A. Kozak	SPCC - 7961	277-2406
J. G. Mihalka	SPCC - 3473	277-3733
I. M. Hoffman	SPCC - 5501	277-2731
LCDR J. R. Gaunt	SPCC - 550	277-3919
Jean J. Fisher	SPCC - 7211	277-2206
CAPT L. A. Garrett	SPCC - 550MC	277-3758
Alfred Sholander	NAEC - 92714	624-2961

APPENDIX F - CO, SPCC LTR, SER 4400, DTD 10 MAR 77

DEPARTMENT OF THE NAVY
NAVY SHIPS PARTS CONTROL CENTER
MECHANICSBURG, PA. 17055

AREA CODE 717
766 0311 EXT 2731
AUTOVON 277 0 EXT. 2731

IN REPLY REFER TO
5501/IMH/209
4400

MAR 10 1977

From: Commanding Officer, Navy Ships Parts Control Center
To: Commander, Naval Supply Systems Command (034)

Subj: Plan for Modification of Ground Support Equipment End Item Allowance Documents; forwarding of

Ref: (a) NAVSUP Ltr SUP 0342E/MB/ser 22 of 31 Jan 77 (NOTAL)
(b) NAVAIR Ltr 5341/HEB Ser 03 of 11 Jan 77 (NOTAL)

Encl: (1) Implementation Plan for Modification of GSE End Item Allowance Documents

1. As requested by references (a) and (b), enclosure (1) is forwarded for review and approval for implementation.

J. R. GAUNT
By direction

Copy to:
NAVAIR (534)(5341)(417)(4104)(4121)(411)
ASO (SCW)
NAEC (GSED)
PMTC (1160)(2243)
NAVAIRSYSCOMREPLANT
NAVAIRSYSCOMREPAC

AEL	EQUIPMENT/NOMENCLATURE	# OF ITEMS ON AEL
0-002430500	Acoustic Minesweeping Gear MK 104 MOD 1 SSE, Iran	13
0-002440501	MK 105 MOD 1 MCM, SSE & Iran	6
0-002420001	Mechanical Minesweeping Gear MK 103 MOD 2 SSE	14
0-002430001	Acoustic Minesweeping Gear MK 104 MOD 1 SSE	19
0-002440001	Electromagnetic Minesweeping Gear MK 105 Tools and accessories	7
2-810035001	Minesweeping Gear MK 103 Org Lev Rept	74
95673625	VP-TSC 1 Tactical Support Center	31
95673626	VP-TSC 2 Tactical Support Center	31
95673627	VP-TSC 3 Tactical Support Center	24

IMPLEMENTATION PLAN FOR MODIFICATION OF GSE

END ITEM ALLOWANCE DOCUMENTS

NOTE 1 -- To assist NAVAIR in completing Milestones 1, 2 and 3, attachment (2) is provided indicating all existing AELs with GSE end items included. It is recommended NAVAIR request these AELs, Milestone 1, on a schedule compatible with their review capability. This review of existing AELs is considered necessary since certain equipments do not have GSERDS, and in fact it may not be desirable for NAVAIR to develop GSERDS, so that marked-up AELs will accomplish the plan to load the ADMRL for appropriate GSE end items. Further, it is considered that some GSERDS may not reflect all GSE end items as documented on the AELs, therefore, requiring a review by NAVAIR prior to ADMRL action.

NOTE 2 -- In developing the 2 AELs concept, SPCC will include appropriate AEL header data for those aviation units which will receive IMRLs to facilitate the unit's allowance determination and requisitioning procedures.

NOTE 3 -- This Milestone 5 is included to highlight a considered need to continually review what is included in the GSERD against what will be included in an AEL, from the Provisioning Technical Documentation baseline, to ensure the NAVAIR desires on ADMRL loading is accommodated for all GSE end items.

NOTE 4 -- Milestone 9 is to satisfy a NAVAIR requirement to identify all consumable GSE end items discretely with an MCC of "W" in the ICP files. Action is underway to do this, however, to ensure total coverage SPCC will use the GSERDS and marked-up AELs received from Milestone 3 to complete the SPCC file loading of MCC of "W", that is, all items indicated for ADMRL loading which are consumable will have an MCC of "W" assigned. (NAVAIR message 050311Z May 76 (NOTAL) applies.)

LISTING OF AELS CONTAINING AVIATION GSE END ITEMS

AEL	EQUIPMENT/NOMENCLATURE	# OF ITEMS ON AEL
0-007230001	Special Support Equipment - SPARROW III AIM-7	319
0-007230002	Telemeteric Data Transmitting Set AN/DKT-38 - SPARROW AIM-7	28
0-007230003	SPARROW AIM-7F Ground Support Equipment	18
0-007230004	SPARROW AIM-7F Bulk and Consumable Item List	214
0-007230005	SPARROW Test Set AN/DPM-21B Bulk Item List	113
0-007230010	Ground Support Equipment SEASPARROW RIM-7H	1
0-007230052	SPARROW Rocket Motor MK 58 MOD 2 Support Equipment List	28
0-007145003	Special Support Equipment - SIDEWINDER AIM-9D/9G/9H	59
0-007600001	Special Support Equipment for PHOENIX Missile	12
0-007600002	Special Support Equipment for PHOENIX Missile	10
0-007030003	Special Support Equipment - SHRIKE AGM-45A	74
0-007250001	Special Support Equipment for CONDOR Missile AGM-53A1	5
0-007330001	Special Support Equipment - BULLPUP	252
0-007400001	Special Support Equipment - WALLEYE Guided Weapon	105
0-007400002	Peculiar and Common Ground Support Equipment WALLEYE	7
0-007700001	HARPOON Special Support Equipment	39
0-007710001	HARPOON (NAVSEA)	In process of being loaded to the files

AEL	EQUIPMENT/NOMENCLATURE	# OF ITEMS ON AEL
0-002600004	Accessories Lubes Tools XM-129 Grenade Lnchr	15
0-002600005	Accessories Lubes Tools XM-129 Grenade Lnchr	15
0-002600006	Accessories Lubes Tools XM-129 Grenade Lnchr	15
0-002910001	GPU-3/A Gun Pod Depot Level SSE	24
0-002910002	GPU-3/A Gun Pod "I" Level SSE	21
0-002910003	GPU-3/A Gun Pod "O" Level SSE	26
0-002000001	Accessories Lubes Tools MK 4 MOD 0 Pod	24
0-002000031	Accessories Lubes Tools MK 4 MOD 0 Pod	120
0-002100001	Accessories Tools MK 12 Gun	63
0-002100002	Accessories Tools MK 12 Gun	63
0-002100003	Accessories Tools MK 12 Gun	63
0-002150001	Accessories Lubes Tools SUU-11A/A Pod	93
0-002150002	Accessories Lubes Tools SUU-11A/A Pod	92
0-002150003	Accessories Lubes Tools SUU-11A/A Pod	93
0-002150004	Accessories Lubes Tools SUU-11A/A Pod	94
0-002150005	Accessories Lubes Tools SUU-11A/A Pod	94
0-002150006	Accessories Lubes Tools SUU-11A/A Pod	94
0-002200001	Accessories Lubes Tools M61A1 Gun	42
0-002200002	Accessories Lubes Tools M61A1 Gun	42
0-002200003	Accessories Lubes Tools M61A1 Gun	42
0-002200010	Accessories Lubes Tools M61A1 Gun	43
0-002200011	Accessories Lubes Tools M61A1 Gun	43
0-002200012	Accessories Lubes Tools M61A1 Gun	43

AEL	EQUIPMENT/NOMENCLATURE	# OF ITEMS ON AEL
0-002300001	Accessories Lubes Tools M60C Gun	24
0-002300002	Accessories Lubes Tools M60C Gun	24
0-002300003	Accessories Lubes Tools M60C Gun	24
0-002300004	Accessories Lubes Tools M60C Gun	2
0-002300005	Accessories Lubes Tools M60C Gun	2
0-002300006	Accessories Lubes Tools M60C Gun	2
0-002310001	Accessories Lubes Tools M60D Gun	29
0-002310002	Accessories Lubes Tools M60D Gun	29
0-002310003	Accessories Lubes Tools M60D Gun	29
0-002310004	Accessories Lubes Tools M60D Gun	1
0-002310005	Accessories Lubes Tools M60D Gun	1
0-002310006	Accessories Lubes Tools M60D Gun	1
0-002310010	GSE - M23 Pintle Mount	2
0-002310011	GSE - M23 Pintle Mount	2
0-002310012	GSE - M23 Pintle Mount	2
0-002310013	GSE - M23 Pintle Mount	2
0-002310014	GSE - M23 Pintle Mount	2
0-002310015	GSE - M23 Pintle Mount	2
0-002400001	Accessories Lubes Tools - ADEN Gun	61
0-002400002	Accessories Lubes Tools - ADEN Gun	69
0-002400003	Depot Test Equipment - ADEN Gun	105
0-002410001	Accessories - Tools ADEN Gun Pod	11
0-002410002	Accessories - Tools ADEN Gun Pod	10
0-002420500	Mechanical Minesweeping Gear MK 103 MOD 2 SSE Iran	20

AEL	EQUIPMENT/NOMENCLATURE	# OF ITEMS ON AEL
0-002700001	GPU-2A Gun Pod - M197 Gun SSE	41
0-002700002	GPU-2A Gun Pod "I" Level SSE	89
0-002700003	GPU-2A Gun Pod "O" Level SSE	12
0-002510001	M197 Gun 20MM Accessories Lubes Tools	49
0-002510002	M197 Gun 20MM Accessories Lubes Tools	49
0-002510003	M197 Gun 20MM Accessories Lubes Tools	49
0-002510004	M197 Gun 20MM Accessories Lubes Tools	51
0-002510005	M197 Gun 20MM Accessories Lubes Tools	51
0-002510006	M197 Gun 20MM Accessories Lubes Tools	49
0-002800001	Accessories Tools SUU 44A Flare Dispenser	3
0-002800002	Accessories Tools SUU 44A Flare Dispenser	2
0-002810001	Tools SUU-40A Flare Dispenser	1
0-002810002	Tools SUU-40A Flare Dispenser	1
0-002900001	Accessories Lubes Tools XM-218 Gun	27
0-002900002	Accessories Lubes Tools XM-218 Gun	26
0-002500001	Accessories Lubes Tools GAU-2B/A Gun	12
0-002500002	Accessories Lubes Tools GAU-2B/A Gun	12
0-002500003	Accessories Lubes Tools GAU-2B/A Gun	12
0-002500004	Accessories Lubes Tools GAU-2B/A Gun	12
0-002500005	Accessories Lubes Tools GAU-2B/A Gun	12
0-002500006	Accessories Lubes Tools GAU-2B/A Gun	12
0-002600001	Accessories Lubes Tools XM-129 Grenade Lnchr	15
0-002600002	Accessories Lubes Tools XM-129 Grenade Lnchr	15
0-002600003	Accessories Lubes Tools XM-129 Grenade Lnchr	15

APPENDIX G - CNO LTR, SER 592D/723781, DTD 7 JUN 76

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, D.C. 20350

IN REPLY REFER TO
Ser 592D/723781
7 June 1976

From: Chief of Naval Operations
To: Distribution List

Subj: Maintenance Responsibility for Equipment Aboard Ship

Ref: (a) CNO ltr Ser 592D/723675 of 23 March 1976

1. During the Ground Support Equipment Maintenance Training Review conducted 1-5 March 1976, the requirement to assign maintenance responsibility for various equipments aboard ship was identified. Accordingly, maintenance responsibility is as follows:

a. Organizational Level. Performed by the user division/department/squadron.

b. Intermediate Level.

(1) Maintained by shipboard AIMD.

(a) NS 50/60 Crash Crane

(b) MB5 Fire Truck (Automotive portion only)

(c) Raymond Lifts, electric reach fork

(d) TAU - (Only the tractor portion)

(e) Aircraft Slings

(f) Ordnance Equipment

(g) Forklifts, diesel (6,000 lbs)

(h) Forklifts, diesel (15,000 lbs)

(i) Forklifts, gas (15,000 lbs)

(2) Maintained by Ships Engineering Department

(a) MB5 Fire Truck (Firefighting unit only)

(b) Pallet Jacks, Electric

(c) Pallet Jacks, Manual (Hand Trucks)

(d) TAU (Firefighting unit only)

Ser 592D/723781
7 June 1976

2. The training impact of the foregoing, if any, will be addressed separately.

W.R. ROSE
By direction
1520

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	29J	(Training Aircraft Carrier) (CVT)
	31H	(Amphibious Assault Ship) (LPH) (LHA)
	42B	(Functional Wing Commanders)
	42E	(Commander Tactical Wings, Atlantic)
	42H	(Attack Wings)
	42I	(Reconnaissance Attack Wing)
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Ser 592D/723781
7 June 1976

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92243

APPENDIX H - NAVY SHIPS PARTS CONTROL CENTER INSTRUCTION 10490.1A, DTD 29 JAN 75

NAEC-GSED-115

DEPARTMENT OF THE NAVY
NAVY SHIPS PARTS CONTROL CENTER
MECHANICSBURG, PA. 17055

IN REPLY REFER TO
SPCCINST 10490.1A
7933/CB
29 Jan 1975

SPCC INSTRUCTION 10490.1A

From: Commanding Officer

Subj: Materials Handling Equipment for Forces Afloat, Fleet Issue Control Points, Naval Shore Establishments and Land Based Operating Forces; administration and control of

Ref: (a) NAVMATINST 4440.38

Encl: (1) Instructions for Preparation of Annual Report of Materials Handling Equipment
(2) Procedures for Declaring Excess Materials Handling Equipment
(3) Procedures for Replacement and Augmentation of Materials Handling Equipment
(4) Procedures for Modifications or Alterations to Materials Handling Equipment
(5) Procedures for Assignment of USN Registration Numbers to Materials Handling Equipment
(6) Fleet Issue Control Point Stock Levels and Repair Funding of Materials Handling Equipment to support Forces Afloat
(7) Instructions for Preparation of the Annual Inventory Report of Materials Handling Equipment held by Fleet Issue Control Points

1. Purpose. To update the administrative procedures governing the reporting, acquisition, utilization, replacement, disposal and overall management of the subject equipment. Instructions and procedures are contained in enclosures (1) through (7).

2. Cancellation. This Instruction supersedes SPCC Instruction 10490.1 (R of 13 November 1973.

3. Background

a. The term "Materials Handling Equipment" is defined as all self-propelled equipment normally used in storage and handling operations in and around warehouses, shipyards, industrial plants, airfields, magazines, depots, docks, terminals and aboard ships. It includes all self-propelled materials handling equipment such as, but not limited to, warehouse tractors, forklift trucks, platform trucks, pallet trucks, straddle-carrying trucks, and mobile cranes, but excludes construction cranes and overhead cranes.

b. The provisions of this Instruction apply to Navy-owned MHE (Materials Handling Equipment) assigned to shore activities, land-based operating forces, forces afloat, and Fleet Issue Control Points. Exceptions are the MHE specified in reference (a) and MHE assigned deployable Air Fleet Marine Forces and Marine Corps activities for which the Commandant of the Marine Corps has primary support responsibility.

4. SPCC Responsibilities. SPCC will:

a. Respond to NAVSUP (Naval Supply Systems Command) on the status of the MHE program as required.

b. Through command channels and in coordination with the appropriate Hardware Systems Command, determine Navy-wide requirements in support of programs and allowances authorized by NAVSUP.

c. Prepare and administer overall allowances in accordance with the NAVSUP-approved unit and activity allowances and recommend changes thereto in accordance with technical and utilization review.

d. Perform all inventory control functions.

e. Formulate the budget.

f. Procure and administer the assignment and utilization of all MHE, in accordance with the military requirements and allowances established by NAVSUP and operational requirements of other Hardware Systems Commands.

g. Administer mobilization reserve stocks in accordance with NAVSUP-approved requirements.

h. Review and approve local utilization standards of Shore Activities and Land-Based Operating Forces.

i. Administer Public Laws relating to MHE.

j. Assign USN Registration Numbers.

k. Establish and promulgate criteria for replacement and retirement.

l. Through command channels and in coordination with the appropriate Hardware Systems Command, determine technical and operational standards to comply with appropriate safety regulations.

m. Act as a central clearing agency for the Navy in exchanging, reassigning, and disposing of MHE.

n. Coordinate requirements for cost accounting and cost reporting procedures with the Comptroller of the Navy and the appropriate Hardware Systems Command.

o. Review annually the status of all equipment, and coordinate and recommend to NAVSUP any necessary changes.

p. Procure initial batteries for battery powered MHE.

5. Responsibility

a. Hardware Systems Commands will:

(1) Advise SPCC, via NAVSUP, of any changes in mission or other contingencies which may affect MHE requirements or necessitate research and development action.

(2) Fund the maintenance and operation costs for MHE assigned, except those equipments for which the Naval Facilities Engineering Command has been specifically assigned funding responsibility.

(3) Establish environmental requirements for the handling of hazardous or explosive materials.

(4) Provide NAVSUP and SPCC with functional requirements for MHE to be used in unusual environmental conditions.

(5) Advise SPCC of NAVSUP-approved initial allowances of shipboard MHE. Recommendations for changes of allowances may be made by NAVSEA and/or SPCC.

b. Shore Activities and Land-Based Operating Forces will:

(1) Establish a continuing program designed to maintain MHE inventories at a level consistent with authorized allowances and operational requirements, utilizing, as appropriate, criteria covering application and utilization contained in Storage and Materials Handling Manual (NAVSUP Publication 284). Additionally to reduce downtime and to provide for efficient utilization, careful attention will be given to the scheduling of preventive maintenance and repairs utilizing, as appropriate, the guidance contained in the Materials Handling Equipment Maintenance Manual (NAVSUP Instruction 10490.32).

(2) Upon receipt of shipment authorization from SPCC, repair excess equipment to good operating condition prior to shipment, when directed by SPCC.

(3) Evaluate allowances of MHE on a continuing basis, and where revised allowances are indicated, submit appropriate recommendations to SPCC, via command channels and primary support bureau or office.

(4) Establish reporting and accounting procedures as necessary to insure the accuracy and availability of data required by this Instruction. Insure that all MHE, except walkie-type pallet trucks and walkie-type tractors, is equipped with hour totalizing meters, and that meters are maintained in operating condition. Establish local utilization standards to determine equipment requirements and to ascertain the effectiveness of equipment assignments. Standards should reflect the particular operating conditions of the activity, such as widespread areas served, specialized applications requiring a particular item of equipment, and elements which normally prohibit full-time productive use, such as maintenance, operator servicing, operational delays, etc. Standards should be established on the basis of current workloads and related to these workloads in such a manner to permit revision for changing workloads. Standards should be expressed as a percentage of the normal workday that the equipment will be employed in productive use at the current workload. Activities will establish standards by type of equipments such as warehouse tractors, warehouse cranes, fork trucks, platform trucks, straddle-carry trucks, pallet trucks (rider type), pallet trucks (walkie-type). Where changing workload conditions will affect on-hand equipment requirements five percent (5%) or more, activities will advise SPCC of such changes at the earliest practicable date. Advise SPCC, via the primary support bureau or office and NAVSUP, of changes in mission or other factors affecting the assignment of MHE. Report unsatisfactory conditions encountered in MHE to NAVSUP via
R) SPCC in accordance with Materials Handling Equipment Maintenance Manual (NAVSUPINST 10490.32) as well as submitting comments pertaining to inadequacies in the equipment technical manual.

A) (5) Local utilization standards will be submitted to SPCC, Code 7833, concurrent with or within 90 days of the Annual Report of Material Handling Equipment. Activities will establish standards by type of equipments, such as:

(a) Warehouse tractors

(b) Warehouse cranes

(c) Forklift trucks

(d) Platform trucks

(e) Straddle - carry trucks

(f) Pallet trucks, rider type

(g) Pallet trucks, walkie type

After initial submission of local standards, subsequent submissions will not be required unless changing workload conditions affect on-hand equipment requirements five percent (5%) or more.

c. Forces Afloat will:

(1) Evaluate allowances of MHE on a continuing basis, and where revised allowances are indicated, submit appropriate recommendations to SPCC, via command channels and NAVSEA and NAVSUP.

(2) Establish reporting and accounting procedures as necessary to insure the accuracy and availability of data required by this Instruction.

(3) Insure that all MHE, except walkie-type pallet trucks and walkie-type tractors, is equipped with hour totalizing meters, and that meters are maintained in operating condition.

(4) Advise SPCC, via command channels, NAVSEA and NAVSUP, of changes in mission or other factors affecting the assignment of MHE.

(5) Report unsatisfactory conditions encountered in MHE to SPCC, in accordance with Materials Handling Equipment Maintenance Manual (NAVSUPINST 10490.32) as well as submitting comments pertaining to inadequacies in the equipment technical manual.

(6) Insure that all equipment, when transferred, is accompanied by applicable on-board repair parts and historical data (including technical manual).

d. Fleet Issue Control Points (Designation and Responsibilities):

(1) Designation. The following NAVSUP FICPs (Fleet Issue Control Points) will service the areas indicated:

(a) Naval Supply Center, Norfolk, Virginia, for Atlantic and Mediterranean Area ships on call or stationed in the First through Eighth, Ninth, and Fifteenth Naval Districts.

(b) Naval Supply Center, San Diego, California, for the Eleventh Naval District.

(c) Naval Supply Center, Oakland, California, for the Twelfth, Thirteenth, and Seventeenth Naval Districts.

(d) FICP Subic, for the Pacific area.

(2) Responsibilities. In addition to responsibilities delineated in paragraphs 5c(1), 5c(2), 5c(3) and 5c(5):

SPCCINST 10490.1A
29 JAN 1975

(a) Provide MHE, with applicable equipment history jacket and on-board repair parts, to forces afloat to fill allowances and emergency requirements, and to effect replacements.

(b) Maintain and repair equipment, utilizing, as appropriate, the guidance contained in the Materials Handling Equipment Maintenance Manual (NAVSUP Instruction 10490.32).

(c) Provide SPCC (Code 7833) with a copy of transaction document (normally DD Form 1348-1 or DD Form 250) for each receipt and issue of material. Documents may be forwarded as occurring, or batched and forwarded monthly if it is more convenient.

E. E. GOODWIN
By direction

Distribution:
SNDL Part 2
X18
Y1 (783 - 100 copies)

SPCCINST 10490.1A
29 JAN 1975

INSTRUCTIONS FOR PREPARATION OF THE ANNUAL REPORT OF MATERIALS HANDLING EQUIPMENT

1. SPCC Report Symbol 4400-21, Exhibits A and B, is applicable. Forces Afloat and Shore Activities will submit reports as follows:

R) Annually, on or about 1 December, SPCC (Ships Parts Control Center) will forward one copy of an EDPM (Electronic Data Processing Machine) listing of MHE (Materials Handling Equipment) comprising the inventory of record assigned to Forces Afloat and Shore Based Activities (Exhibit C). In addition, blank 80-column transmittal forms as denoted by Exhibits A and B will be forwarded for updating. Effective date of updated reports will be 31 December. One annotated set of 80-column forms will be completed and returned to SPCC prior to 31 January each year. Forces Afloat and Shore Activities that have not previously reported MHE will not receive this listing for their initial report, but will prepare the initial report in the identical format as provided herein. This report is not applicable to Fleet Issue Control Points.

2. Preparation of the Annual Report

a. General

(1) Upon receipt of the listing, the descriptive data shown in columns 2 through 5, 7 through 14, 16 and 17, will be verified. Inaccuracies or necessary changes will be reported to SPCC on the 80-column sheets supplied with the annual report. Acquisition costs, column 17, will be the actual cost of the equipment. Two sets of transmittals will be completed - one set for on-board equipment (as denoted Exhibit A) and one set for dispositions (as denoted Exhibit B).

(2) The total number of items shown for each equipment code and capacity will be compared with the activity approved allowance. Allowances for additional equipment will be requested on supplemental sheets attached to the transmittals and contain the necessary information for justification required by enclosure (3) of this Instruction.

(3) Data in columns 1 and 18 through 24 will be updated on the basis of local records. Updated data will be shown typewritten or in black ink in the appropriate columns on the transmittal forms. All zeros will be distinguished from alpha "O" by insertion of a slash through the zero, as "Ø". All numeric columns will be right justified and zero filled. For example, Operating Hours, columns 75-79 of Exhibit A to this enclosure, will be reported "ØØ85Ø" if 850 hours are indicated by the equipment totalizing meter.

(4) Standard 80-column Transmittal On-Board - (Exhibit A):

(a) Column 2: Enter the USN Numbers of equipments which are currently on-board. Entries will be in the same sequence as on the EDPM listing. Any on-board unit not listed on the EDPM listing must be added after the last entry.

(b) Columns 1 and 18 through 24: Entries will be in accordance with instructions provided by paragraph 2a(3) of this enclosure.

(c) Make no other entries on this enclosure.

(5) Standard 80-column Transmittal - Dispositions (Exhibit B):

(a) Column 2: Enter only those USN Numbers listed on the EDPM listing which are not on-board. Fill in columns 2, 3, 4 and 5 only to indicate where material was transferred.

(b) Columns 1 and 6 through 25: Make no entries in these columns, except to correct inaccuracies in listed data.

(6) Any MHE acquisitions which are not listed on the EDPM listing furnished for reconciliation by SPCC will be added at the end of the on-board Transmittal form and columns 1 through 5, 7 through 14, and 16 through 24 completed as appropriate. Information included in the listing for a unit no longer held by the reporting ship or shore activity will be indicated as dispositions, the procedures of which are described herein.

(7) In entering data on the 80-column Transmittals, do not exceed the number of spaces provided for the required data. Enter the Activity Name, UIC (Unit Identification Code), and date on the top of each Transmittal sheet. Make entries on every other line of the Transmittal sheet.

(8) Any columns not applicable or for which data are not available will be left blank. Do not show "NA," "NONE" or other wording.

(9) In column 1, if items previously coded 2, 3 or 4 are changed to another code, cite reasons for such changes on supplemental sheets attached to the report. SPCC may have equipment on order for which there is no longer a requirement.

(10) Columns 6, 15 and 25 are for SPCC use and will be left blank.

(11) Estimated cost to place in E-1 condition, reported in column 22, should be based upon estimates obtained by inspection during preparation of report. In estimating cost to repair to E-1 condition, forces afloat and shore activities will not necessarily include repairs of all items showing any wear, but will limit estimated costs to repair and/or replacement of parts that would be necessary

to insure a minimum or an additional three years of operation of the equipment, with normal maintenance. Condition codes are defined in current disposal regulations.

(12) Forces Afloat, when applicable, will indicate by special note at end of listing, the period of time during the reportable year that MHE was not in use because of ship overhaul.

b. Descriptions of columns and instructions for posting data:

Column Number	*Column Description*	*No. of Spaces*	*Instructions for Posting*
1	For Use only by Shore Activities	1	Code the recommended action in accordance with the following: Code 1 - Desire to retain the unit. Code 2 - Unit is excess to needs. (Column 22 must be completed. Refer to enclosure (2) for additional instructions.) Code 3 - Replacement of unit with identical type is desired. (Column 22 must be completed. Refer to enclosure (3) for additional instructions.) Code 4 - Replacement of unit with a non-identical type is desired. (Column 22 must be completed. Refer to enclosure (3) for additional instructions.)
2	Permanent USN Registration Number	8	Number, including hyphen or space for hyphen, as assigned by SPCC. If USN Number has not been assigned, include present Identification Number and request assignment of permanent USN Registration Number in accordance with enclosure (5).
3	Primary Support Hardware Systems Command or Office	1	Indicate HSC or Office by the following codes: NAVORD activities, use Code 4 BUMED activities, use Code 2 BUPERS activities, use Code 3 NAVSEA activities/Forces Afloat, use Code 5 NAVSUP activities, use Code 6 NAVFAC activities, use Code 7

Column Number	Column Description	No. of Spaces	Instructions for Posting
			ONR activities, use Code 8 SECNAV activities, use Code A CNO activities, use Code C MSTS activities, use Code D NAVAIR activities, use Code 1; Forces Afloat, use Code 5
4	Ship or Activity Unit Identification Code	5	Use the Unit Identification Code as listed in NAVCOMPT Manual, Volume 2, Chapter 5.
5	Ship or Activity Name	8	SPCC will supply abbreviations for reporting ships or activities. Where necessary for clarity or compatibility with procedures, this coding will be revised by SPCC.
6	Equipment Code	5	FOR SPCC USE ONLY.
7	Type of Equipment	2	Indicate the type by the following codes: "TR" - Tractor "CR" - Crane "FO" - Forklift Truck "TI" - Tiering Truck "PL" - Platform Truck "ST" - Straddle-Carry Truck "PA" - Pallet Truck "SI" - Sideloading Fork Truck
8	Type of Fuel	1	Indicate the type of fuel by the following codes: "D" - Diesel "E" - Electric "G" - Gasoline "P" - Propane "O" - Other Gas-Electric cranes should be classified as Electric (E). Gas-Electric forklift trucks should be classified as Gas (G).

Column Number	Column Description	No. of Spaces	Instructions for Posting
9	Type of Tires	1	Indicate the type of tires by the following codes: "S" - Solid Rubber Tires "P" - Pneumatic Rubber Tires "O" - Other
10	Capacity	5	Indicate capacity in pounds, right justified, zero fill if less than five digits.
11	Slue or Lift Height	3	Indicate boom slue, in degrees, for all cranes, except magazine cranes. Indicate maximum lift height in inches for forklift trucks, tiering trucks, elevating platform trucks and sideloading forklift trucks.
12	Special Use	2	Indicate special use as follows: (R "MG" - Magazine Crane "EL" - Elevating Platform Truck "HR" - High-Rider, Forklift Truck "SR" - Stand-up Rider, Forklift or Pallet Truck "FD" - Four Directional "RT" - Rough-Terrain Forklift Truck "CO" - Continuous Operation "LP" - Low Profile "SP" - Stock Picker Selector "WA" - Walkie
13	Special Features	2	Indicate special features as follows: "TS" - Triple-State Mast "SE" - Spark-Enclosed or Spark-Proof (Radio interference suppression is not spark-enclosed.) "EP" - Explosion-Proof "SA" - Spark-Arrester Muffler "CR" - Crawler-Mounted "EC" - End-Control NOTE: IF UNIT HAS TRIPLE-STAGE MAST OR IS END-CONTROLLED AND IS SPARK-ENCLOSED OR SPARK-ARRESTED, INDICATE "TS" OR "EC" RESPECTIVELY.

	Column Number	Column Description	No. of Spaces	Instructions for Posting
	14	Year of Manufacture	2	Use the last 2 digits of the year that the unit was manufactured.
	15		2	FOR SPCC USE ONLY.
	16	Manufacturer Code	2	Indicate the manufacturer's code number in accordance with the codes listed in paragraph 3 of this enclosure. When manufacturer is not listed, leave column blank and furnish complete name of manufacturer in supplemental data, citing Registration Number of the MHE.
R)	17	Acquisition Cost	5	Indicate the original acquisition cost of the unit, dollars only (drop cents). For battery powered MHE the cost of the battery will not be included in the acquisition cost. Entries should be right justified and zero filled.
	18	Condition Code E-1 Ex condition ≈ E-2 . in good condition E-3 used, but deteriorated needs repairs E-4 Poor condition O-4 should be used!	2	Report condition of item as of date of the report, in accordance with the codes contained in current disposal regulations. Where estimated cost to place unit in E-1 condition is reported in Column 22, condition code should be consistent with the cost cited. Only those units which cannot be used without repairs should be reported in an R condition.
	19	Repair Costs Past Year	4	Report actual labor and material costs for the past calendar year, dollars only. Where actual costs are not available, use estimated costs and submit supplemental data with report advising reason(s) why actual costs are not available.
	20	Downtime for Repairs	3	FORCES AFLOAT: Estimate the productive time lost during the year when the unit was inoperable due to lack of parts.

Column Number	Column Description	No. of Spaces	Instructions for Posting
			SHORE ACTIVITIES: Report productive hours lost during past calendar year for repairs, based on a single shift, 5-day per week operation. See instructions for posting Column 23. Hours spent making repairs and hours lost awaiting parts, labor, etc., should be recorded separately by the activity in accordance with NAVSUP Instruction 10490.32, but only the total of these items (the total time the equipment is under the control of the maintenance shop) will be listed on this report. Time spent on preventive maintenance will be included only to the extent provided by NAVSUP Instruction 10490.32.
21	Repair Costs to Date	4	Report total repair costs accumulated to date.
22	Estimated Cost to Place Equipment in E-1 Condition	4	FORCES AFLOAT: Report cost, dollars only, for those units Coded 2, 3 or 4 in Column 1. SHORE ACTIVITIES: Report cost, dollars only, for those units Coded 2, 3 or 4 in Column 1. Estimated cost submitted by activities will be supported by Shop Repair Orders and supplemental sheets with the report will certify that estimates are supported by Shop Repair Orders and are available upon request. Refer to paragraph 2a(11) of this enclosure.
23	Percent Usage Past Year	2	Report percent usage for each unit. Percent usage should be based on 2,000 hours available per year, or 166 hours per month if unit was assigned for less than one year. Do not deduct hours listed in Column 20 from available hours. Where usage is not limited to single shift, 5-day per

Column Number	*Column Description*	*No. of Spaces*	*Instructions for Posting*
			week operation, percent usage should still be based on 2,000 hours available per year, or 166 hours per month, and supplemental data should be submitted to state the appropriate available hours. Except for walkie-type tractors and pallet trucks, hours of usage will be based on actual readings of hour meters. For walkie-type tractors and pallet trucks without hour meters, estimate the hours of usage.
24	Operating Hours to Date	5	Report the total number of hours the unit has been used to date. Except for walkie-type tractors and pallet trucks, reported hours will be based on actual meter readings. Where replacement or repair of meters has been effected, include hours shown on the replaced or repaired meter. Also, include 50 hours per month for each month that the equipment was in storage. For walkie-type tractors and pallet trucks without hour meters, estimate the operating hours to date.
25	SPCC Replacement Action	1	FOR SPCC USE ONLY.

R) 3. Manufacturers' Codes for use in Column 16:

Code	*Manufacturer*
01	Allis-Chalmers Mfg. Co.
02	Austin-Werner Construction Equip. Div., Baldwin-Lima-Hamilton Corp.
03	Automatic Transportation Co.
04	Baker Ind. Trucks Div. Otis Elevator Co.
05	Barrett-Cravens Co.
06	Big Joe Mfg. Co.
07	Black Hawk Mfg. Co.
08	Buda Co.
09	Champ Corp.

Code	Manufacturer
10	Clark Equipment Co.
11	Cleveland Automatic Machine Co.
12	Conveyancer Fork Trks Ltd.
13	Crescent Truck Co.
14	Crown Controls Co. Inc.
15	Cushman Motor Works
16	Drott Mfg. Co.
17	Easton Car & Construction Co.
18	Economy Engineering Co.
19	Electrical Marketeer Mfg. Co.
20	Elwell Parker Electric Co.
21	EMSCO Derrick & Equip. Co.
22	Erickson Power Lift Trucks, Inc.
23	Equipment Sales Co.
24	Harry Ferguson Co.
25	Four Wheel Drive Auto Co.
26	Gerlinger Carrier Co.
27	Grove Mfg. Co.
28	H. H. Mfrs.
29	W. F. Hebard & Co.
30	Heifred Corp.
31	Hughes Keenan Div., U. S. Air Conditioning Corp.
32	Hyster Co.
33	International Harvester Co.
34	Kalamazoo Mfg. Co.
35	Keystone Engineering Co.
36	Lasher Spring & Electric Car Corp.
37	Lewis Shepard Products, Inc.
38	Lift Trucks Inc.
39	Link Belt Co.
40	Lull Engineering Co.
41	Mercury Mfg. Co.
42	MOTEC, Ind.
43	Moto-True Co.
44	Northwestern Motor Co.
45	Pettibone-Mulliken Corp.
46	Pressed Steel Car Co.
47	Raymond Corp.
48	Rocky Mount Steel Prod.
49	Ross Carrier Co.
50	Service Caster & Truck Co., Inc.
51	Silent Hoist & Crane Co., Inc.

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Code	Manufacturer
52	Taskmaster Equipment Co.
53	Taylor-Dunn Mfg. Co.
54	Tips Engine Works
55	Towmotor Corp.
56	Transitier Truck Co.
57	Travelift & Engineering Co.
58	United Tractor Co.
59	Vanguard Engineering Co.
60	Wright Hibbard Ind. Truck Co.
61	Yale & Towne Mfg. Co.
62	American Pulley Co.
63	Federal Fawick Corp.
64	Hensel Green & Co.
65	Colson Mfg. Co.
66	Jervis B. Webb Co.
67	Caterpillar Tractor Co.
68	Drexel Dynamics Corp.
69	IME Co., Inc.
70	Lo-Lift Sales Corp.
71	West Bend Equipment Corp.
72	Koehring Co.
73	Consolidated Diesel Corp.
74	Callahan Equipment Co.
75	Market Forge Co.
76	North American Mfg. Co.
77	Athey Products Corp.
78	Frank G. Hough
79	Schreck Industries
80	Blue Giant Inc.
81	Western Gear

REPORT SYMBOL 4400-21

MHE 80 COLUMN [illegible]

MHE ON BOARD [illegible]

1 ARA	2 USN	3 FSA	4 UIC	5 ACTIVITY NAME	6 EQUIP CODE	7 TY EQP	8	9	10 CAPACITY	11 SLUE/LIFT	12 SPL USE	13 SPL FTR	14 YR MFR	15 SPEC USE	16 MF CODE	17 ACQUISITION COST	18 COND CODE	19 REPAIR COSTS PAST YR	20 DOWN TIME	21 REPAIR COSTS CUMULATED	22 EST. COST REPAIR TO E-R	23 % USAGE PAST YR	24 OPERATING HRS. TO DATE	25

Enclosure (1), EXHIBIT A

REPORT SYMBOL 4400-21

MHE 80 COLUMN TRANSMITTAL
AND SPCC 10490

MHE DISPOSITIONS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	15	17	18	19	20	21	22	23	24	25
ARA	USN	PSA	UIC	ACTIVITY NAME	EQUIP CODE	TY EQP	FUEL	[illegible]	CAPACITY	SLUE LIFT	SPL USE	SPL FTR	YR MFR	SPCC USE	MFR CODE	ACQUISITION COST	COND CODE	REPAIR COSTS PAST YR	DOWN TIME	REPAIR COSTS CUMULATED	EST COST REPAIR TO E-[illegible]	% USAGE [illegible]	OPERATING HRS TO DATE	[illegible]
1	2–9	10	11–15	16–23	24–28	29–30	31	32	33–37	38–40	41–42	43–44	45–46	47–48	49–50	51–55	56–57	58–61	62–64	65–68	69–72	73–74	75–79	80

EXAMPLES OF ANNUAL LISTING SENT TO FORCES AFLOAT AND SHORE BASED ACTIVITIES

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
A	USN	P					F	T					YR	SPCC		ACQUI	CN	REPR	DWN	ACCU		%	ACCU	S
							U	I		SLUE	SPL	SPL	MFR	MFR		COST	CD	PAST	TME	REPR		UT	HRS	A
R		S		ACTIVITY NAME	EQUIP CODE	TY	E	R	CAPA-	LFT	SE	FTR		USE							E-1				
		A	UIC			EQP	L	E	CITY						CODE							COST				
C. O. NAVAL SUPPLY CENTER NORFOLK																								
1	11-01998	6	00189	NSCNORVA	10040	TR	G	P	0400				52	11	10	01775	03	0180	092	2354		51	08390	
3	11-02119	6	00189	NSCNORVA	10040	TR	G	P	0400				52	11	10	01775	R4	0154	080	2230	1010	56	10426	4
1	11-53401	6	00189	NSCNORVA	10040	TR	G	P	0400				62	11	44	02363	01	0022	012	0091		48	01920	
3	13-94306	6	00189	NSCNORVA	31066	FO	G	S	06000	168			51	30	55	04208	R4	0269	474	3718	2272	63	09807	5
1	13-35016	6	00189	NSCNORVA	34039	FO	E	S	03000	144			49	36	10	03044	03	0294	488	2527		49	17263	
2	13-43655	6	00189	NSCNORVA	35044	FO	E	S	04000	144			SE	52	36	10	04050	02	0173	201	2884	0318	18	09855
1	15-70059	6	00189	NSCNORVA	50300	ST	G	P	30000				61	50	32	14500	02	0325	199	0377		52	02851	

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29 JAN 1975

PROCEDURES FOR DECLARING EXCESS MATERIALS HANDLING EQUIPMENT

1. Materials Handling Equipment becomes excess by reason of having been replaced, a reduction in inventory or allowance, or an unserviceable condition due to usage, age or accident. Report of Excess Personal Property, Standard Form 120, will be used in declaring such excess. Standard Forms 120 will be prepared and submitted to SPCC in accordance with current disposal regulations and instructions contained herein.

2. Procedures for Excess Materials Handling Equipment: Materials Handling Equipment that becomes excess to the holding activity or ship at the time of the annual report will be reported as follows:

a. Shore Activities:

(1) Code the unit 2 (Excess) in column 1 of the annual report, and indicate the estimated cost to place in E-1 condition in column 22.

(2) Submit a Report of Excess Personal Property, Standard Form 120, to SPCC with the annual report, where practicable, but in any event not later than 60 days subsequent to the submission date of the report.

b. FICPs: Submit a Report of Excess Personal Property, Standard Form 120, to the Ships Parts Control Center.

c. Forces Afloat:

(1) Turn in the unit, with applicable on-board repair parts and historical data (including technical manual), as soon as practicable, to the nearest Fleet Issue Control Point. Subsequent handling and reporting become the responsibility of the FICP.

(2) Excess equipment received from ships by FICPs that do not meet the disposal criteria of NAVSUPINST 10490.32 and is required to meet outstanding shipboard or FICP stock replenishment requirements will be repaired and returned to FICP stock. Repair funding will be provided by Type Commanders.

3. Excess during interval between reports: MHE that becomes excess during the interval between annual reports will be reported as follows:

a. Forces Afloat: A letter report, indicating the USN Registration Number, a brief description, the condition and an estimate of the cost to place in E-1 condition, will be submitted to the appropriate FICP. The unit will be turned into the FICP as soon as practicable.

b. Shore Activities: Report of Excess Personal Property, Standard Form 120, will be submitted to SPCC.

4. Reports of Excess Personal Property, Standard Form 120, will be submitted in accordance with current disposal regulations and the following special instructions:

a. Submit to SPCC.

b. Indicate the major repairs required and the costs to repair the unit to both E-1 and O-2 conditions. Substantiate these costs by the preparation and retention of Shop Repair Orders for each unit reported.

c. Indicate whether or not replacement is required or whether replacement has been received. In the case of replacement received, the USN Registration Number of the unit received should be cited.

5. Reports covering excess equipment that do not meet the retirement criteria of NAVSUPINST 10490.32 will be held by SPCC. The equipment will be considered available for redistribution to meet other Navy requirements, and should be held pending transfer instructions. Upon receipt of shipment authorization from SPCC, holders will repair excess equipment to good operating condition prior to shipment, when directed by SPCC. When transferred, equipment will be accompanied by the equipment history jacket, maintained in accordance with NAVSUPINST 10490.32.

6. Excess reports covering MHE that meet retirement criteria will be processed by SPCC in accordance with current disposal regulations. Prior to receipt of disposition instructions, holding activities will place excess equipment in covered storage or otherwise assure that no further deterioration will occur.

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29 JAN 1975

PROCEDURES FOR REPLACEMENT AND AUGMENTATION OF MATERIALS HANDLING EQUIPMENT

1. Requirements for MHE (Materials Handling Equipment) will be made known to the Ships Parts Control Center through the annual report, or by letter or message, when urgent. When requirement is urgent, a copy of the request will be forwarded simultaneously to the Command providing primary support, with a priority designator, when warranted. Forces afloat will be provided equipment via Fleet Issue Control Points. When the initial allowance of MHE is provided under the Ships Construction, Navy Appropriation, equipment may be delivered directly to the ship. Naval Shore Establishment and Land-Based Operating Forces will not acquire, transfer, or rent equipment without SPCC approval.

2. Forces afloat and FICPs will be guided as to types and requirements by the Master Allowance List Materials Handling Equipment - Forces Afloat, provided by SPCC. Deviations from this List must be submitted to SPCC for review, evaluation, and determination of action to be taken. For Naval Shore Establishments and Land-Based Operating Forces, the Military Standard, Materials Handling Equipment, MIL-STD-137 as amended, covers standard types and sizes of general purpose MHE used by Department of Defense Activities. In addition, NAVWEPS Publication OP2173, Volume 1, Catalog of Handling Equipment for Ammunition and Explosives, Table 1-1, lists the types and required features of equipment approved for use in handling various types of ordnance. Activities will be guided by and indicate requirements in accordance with these publications. Requirements for equipment not included in MIL-STD-137 will contain detailed description and complete justification for deviating. Requirements will similarly be provided for specially protected equipment for use in an atmosphere containing a high concentration of abrasive material.

3. General Procedures

a. Identical Replacements. Identify unit to be replaced by coding 3 in Column 1 of the annual report when identical replacement is required. FICPs will be advised of planned replacement actions through copies of contracts. For Naval Shore Establishments and Land-Based Operating Forces, supply action, either by new procurement or redistribution will be initiated by SPCC when the unit meets, or will meet by the time of delivery, retirement criteria. Activities will be advised of planned replacement actions through copies of contracts. Upon receipt of replacement equipment, the activity will report the replaced equipment excess in accordance with procedures contained in enclosure (2) to this Instruction. Replacement actions are taken to replace a specific unit of equipment and SPCC will advise activities accordingly. However, where an activity determines it is more feasible to replace a different unit, due to changing conditions during the interval between initiation of action and delivery of equipment, the

activities will replace the most feasible unit and advise SPCC accordingly on the report of excess covering the replaced equipment.

b. Non-identical Replacements: Identify unit to be replaced by coding 4 in Column 1 of the annual report when non-identical replacement is required. In addition, supplemental sheets will be submitted with the annual report giving complete description, projected use of the equipment desired, and requesting that the allowance of MHE be changed accordingly. The USN Registration Number(s) of equipment to be replaced will be included in the supplemental sheets. Supply action to effect replacement will conform to the procedures in paragraph 3a, above.

c. Augmentation: Augmentation of equipment will only be effected when an increase in allowance has been approved and when funds are available. Requests by Forces Afloat for an increase in allowance will be submitted to SPCC via the Type Commander and NAVSHIPS. Requests by Naval Shore Establishments and Land-Based Operating Forces will be submitted to SPCC via command channels. Upon review and analysis, requests will then be forwarded by SPCC to NAVSUP for approval. Requests will contain justification indicating the intended use, the economic or other advantages that will accrue, and any other data which will contribute to a thorough understanding and appreciation of the requirements. This letter should be referenced in the annual report. Supply action to provide equipment will conform to the procedures in paragraph 3a, above.

d. For replacement and/or augmentation requests, submit supplemental data to advise whether battery is required for electric powered MHE, and if so, whether lead-acid type or nickel-iron-alkaline type is required. Requests for Forces Afloat and FICPs for replacement batteries and battery charging equipment will be submitted to the Type Commander. Requests by Naval Shore Establishments and Land-Based Operating Forces will be submitted to the primary support Command or Office. Requests for replacement or augmentation of straddle-carry trucks will include inside load space size requirements and whether or not long shoes are required.

4. Special Procedures for Forces Afloat

a. Forces Afloat will receive MHE to fill allowances or for replacement via the nearest FICP. All equipment held by FICPs for issue to Forces Afloat will be new, or in good operating condition.

b. Requests for equipment to fill ships' allowances may be made by letter or message to the nearest FICP, referencing this Instruction. Whenever practicable, such requests should be made at least 30 days in advance of the date the MHE will be required. The Commanding Officer will certify that the equipment requested will not exceed the authorized allowance for the ship.

c. Requests for equipment to replace on-board equipment that is no longer serviceable, or which for other reasons warrants replacement, will be made to the nearest FICP. FICPs, normally using retirement criteria cited in NAVSUP Instruction 10490.32, will determine when replacement is justified, and will exchange the equipment as appropriate. However, extensive exposure to sea water, peak usage, increased susceptibility to damage due to rolling of ships and operational restrictions may necessitate accelerated replacement. Specific data supporting replacements for equipment that does not meet the retirement criteria cited in NAVSUP Instruction 10490.32 are required when indicating replacement requirement.

d. A ship having on-board MHE in need of repairs that are beyond the capability of the ship's company, may turn the equipment in to the nearest FICP which will repair and return, or provide a suitable replacement. Repairs will be made by the FICP. All gasoline powered fork trucks should be replaced by diesel powered fork trucks designed specifically for shipboard use, unless otherwise approved by SPCC.

e. Contingent or approval of appropriate FICP, an authorized item of ship's equipment that does not qualify for replacement but is in need of repair, may be exchanged at a port of call provided, repair of the ship's equipment cannot be accomplished aboard ship or by the port of call prior to the ship's departure. Arrangements for repair of equipment shall be made as soon as possible upon arrival at a port of call prepared to make such repairs.

f. MHE on-board in excess of allowance will be off-loaded at the nearest FICP.

g. Upon inactivation, ships will deliver all MHE to the nearest FICP, together with the historical data and on-board repair parts.

5. The procurement of equipment to meet SPCC authorized replacement or augmentation will be initiated by SPCC in accordance with established procedures. In the case of Forces Afloat and FICPs, the procuring agency will provide, to FICPs, three (3) copies of contracts. For Naval Shore Establishments and Land-Based Operating Forces, the procuring agency will provide to all consignees three (3) copies of contract. Activities will distribute these copies as necessary but one copy should be forwarded to the Office that has local administration and control of MHE.

6. Redistribution or transfer of equipment to meet SPCC authorized replacement or augmentation for Forces Afloat will be effected by FICPs. For Naval Shore Establishments and Land-Based Operating Forces, SPCC will initiate an SPCC Shipping Order to the consignor with a copy to the consignee.

PROCEDURES FOR MODIFICATIONS OR ALTERATIONS TO MATERIALS HANDLING EQUIPMENT

1. Shore Activities, Land-Base Operating Forces and FICPs: Materials Handling Equipment will not be modified, altered or cannibalized without obtaining prior written approval of SPCC. Activities desiring to modify, alter, or cannibalize an item of MHE, to obtain increased utility or effectiveness, will submit a justification for the proposed modification, alteration or cannibalization to SPCC, Code 783, citing in detail the benefits to be obtained. Activities will include, as a part of the justification, detailed drawings of the proposed modification or alteration to permit review of feasibility and to prevent voidance of the manufacturer's warranty.

2. Forces Afloat: Materials Handling Equipment assigned to Forces Afloat may be modified, as necessary, to meet operational requirements, without obtaining prior approval. Justification and details of the modification will be furnished to SPCC as soon as practicable.

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PROCEDURES FOR ASSIGNMENT OF USN REGISTRATION NUMBERS FOR MATERIALS HANDLING EQUIPMENT

1. When Materials Handling Equipment is received without a USN Registration Number, the following action will be taken:

a. FICPs and Ships will forward a letter furnishing the following descriptive data as appropriate:

(1) Type of Equipment (fork truck, warehouse tractor, etc.).

(2) Capacity in terms of pounds.

(3) Type of Power (indicate if spark-enclosed, explosion-proof or equipped with spark-arresting device).

(4) Type of Tires.

(5) Maximum Lift Height.

(6) Collapsed Mast Height.

(7) Type of Boom (stationary or swing boom).

(8) Degree of Swing.

(9) Manufacturer.

(10) Model Number.

(11) Manufacturer's Chassis Serial Number.

(12) Year of Manufacture.

(13) Acquisition Cost.

(14) Inside dimensions of battery compartment (for electric-powered only).

(15) Contract or Requisition Number.

b. Shore Activities will forward two (2) copies of DD Property Record (DD Form 1342) to SPCC. Equipment will be described according to Description Patterns 31-027A through 31-027F set forth in Facilities Inventory Handbook, NAVEXOS P-426. One copy of the DD Form 1342, with assigned USN Registration Number, will be returned to the fiscal office of the Property Accounting Activity. That activity will update records and notify the holder of the registration number assigned.

c. Land-Based Operating Forces will forward a letter request to SPCC furnishing the following descriptive data as appropriate:

(1) Type of Equipment (fork truck, warehouse tractor, etc.).

(2) Capacity in terms of pounds.

(3) Type of Power (indicate spark-enclosed, explosion-proof, or equipped with spark-arresting device).

(4) Type of Tires.

(5) Maximum Lift Weight.

(6) Collapsed Mast Height.

(7) Type of Boom (stationary or swing boom).

(8) Degree of Swing.

(9) Manufacturer.

(10) Model Number.

(11) Manufacturer's Chassis Serial Number.

2. The assignment of USN Registration Numbers will be in accordance with NAVCOMPT Manual, Volume 3, Chapter 6.

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FICP STOCK LEVELS AND REPAIR FUNDING OF MATERIALS HANDLING EQUIPMENT TO SUPPORT FORCES AFLOAT

1. Materials Handling Equipment is located at Fleet Issue Control Points in order to provide immediate service to the Fleet. Requests for MHE that cannot be met by FICPs will be forwarded to the Ships Parts Control Center.

2. FICPs will carry the following types of equipment in the quantities shown (low levels are shown in parenthesis).

EQUIPMENT	NOR	SD	OAK	SUBIC
Forklift 6000 lb. DED PRT	3(1)	3(1)	3(1)	3(1)
Forklift 6000 lb. DED SRT	30(10)	10(5)	15(5)	8(3)
Forklift 15,000 lb. DED PRT	4(2)	3(1)	3(1)	3(1)
Forklift 20,000 lb. DED PRT	3(1)	2(1)	2(1)	2(0)
Forklift 6000 lb. DED Rough Terrain	10(3)	10(3)	2(1)	3(1)
Forklift 4000 lb. Elec EE Sit Down	30(10)	15(5)	15(5)	10(3)
Forklift 4000 lb. Elec EX Sit Down	10(3)	3(0)	10(3)	2(0)
Forklift 4000 Elec EE Stand Up	15(5)	10(3)	15(5)	2(0)
Multidirectional 4500 lb. Elec EE	6(2)	4(1)	4(1)	0
Pallet Truck 6000 lb. Elec EE	25(5)	10(2)	15(5)	10(2)
Pallet Truck 6000 lb. Man-Hyd	30(10)	10(2)	22(8)	10(2)
Forklift 6000 lb. Elec EE Sit Down	4(1)	3(1)	2(0)	0

3. When fleet support actions cause an FICP's inventory to reach an excess or low level of the quantities shown in paragraph 2, the following actions will be taken:

a. Report excess in accordance with enclosure (2) of this Instruction.

b. When the low level is reached, SPCC will be advised and will effect the necessary replenishment action.

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4. FICPs will carry MHE in Appropriation Purchase Account (APA), under Cognizance Symbol 2B. This MHE will not be picked up in Plant Account.

5. Repair Costs. The following information is provided for guidance of FICPs in assignment of repair costs:

a. Repairs to ship's equipment will be charged to Type Commanders' funds. Repairs will be accomplished and the equipment returned to the ship.

b. When time in port is insufficient to permit completion of repairs to ship's equipment in time to return the same equipment to the ship, other equipment, in good repair, will be provided in exchange to the ship. In such cases, Type Commanders' funds will be charged for the repairs to the equipment left behind.

c. Repairs to equipment excess to active ships or turned in by decommissioned ships will be charged to Type Commanders' funds. Excepted will be items received in excess of FICP inventory high limits which will be held without repair and reported by Standard Form 120 to SPCC (Code 783). If determined by SPCC to be excess to overall Navy-wide shipboard requirements, the SF-120 will be returned with instructions to either transfer to a shore activity or otherwise dispose of as Navy excess. Repairs to former shipboard equipment thus transferred out of the shipboard inventory will be funded by the receiving shore activity. Standard Forms 120 for equipment determined to be still required for shipboard use will be returned by SPCC to the originating FICP annotated "Repair for FICP Stock." Repairs to equipment thus returned to FICP stock will be charged to Type Commanders' funds.

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29 JAN 1975

INSTRUCTIONS FOR PREPARATION OF THE SEMI-ANNUAL INVENTORY REPORT OF MATERIALS HANDLING EQUIPMENT HELD BY FLEET ISSUE CONTROL POINTS

1. SPCC Report Symbol 4400-22 is applicable. Fleet Issue Control Points will submit a semi-annual report for materials handling equipment held by FICPs during period 1 January through 30 June to reach the Ships Parts Control Center prior to 31 July each year, and the period 1 July through 31 December to reach SPCC by 31 January each year. This report will reflect status of on-hand MHE at the end of the period, as well as reflecting all issues and receipts during the reporting period.

2. Instructions for completing this report follow:

Column Number	*Column Description*	*Instructions*
2	USN Number	List all units held by FICP during reporting period. USN Numbers should be listed numerically.
4	UIC	Enter UIC (Unit Identification Code) of activity or ship "issued to". For receipts, leave blank.
5	Activity Name	Enter Hull Number of ship issued to; otherwise, leave blank.
10 thru 13	Received From	Enter UIC and Hull Number of ship "received from" for equipment received. Leave blank for issues and on-hand.
14	Year of Manufacture	Enter year of manufacture.
18	Condition Code	Enter current condition code of each unit on-hand as of 30 June or 31 December. Regarding issues, enter condition code at time of issue.
19	Repair Costs	Indicate total repair costs incurred during the reporting period. These costs will include all repairs performed by or for the FICP, but will exclude repairs performed by a ship or while in the custody of a ship.

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5. The report will be submitted on standard 80-column transmittal forms and divided into three sections:

a. Issues: List of equipment issued during the reporting period which was not later returned. (See Exhibit A.)

b. Receipts: List of equipment on-hand at the end of the period which was received during the reporting period. (See Exhibit B.)

c. On-Hand: List of equipment on-hand at the end of the period which was received prior to the reporting period. (See Exhibit C.)

REPORT SYMBOL 4400-22

MHE 80 COLUMN TRANSMITTAL

ISSUES - FICP NORFOLK

FOR PERIOD: 1 JAN 1974 - 30 JUNE 1974

1 ARA	2 USN	3	4 UIC	5 ACTIVITY NAME	6 EQUIP CODE	7 TY EQP	8	9	10 CAPACITY	11 SLUE/LIFT	12 SPL USE	13 SPL FTR	14 YR MFR	15 SPCC USE	16 MFR CODE	17 ACQUISITION COST	18 COND CODE	19 REPAIR COSTS PAST YR	20 DOWN TIME	21 REPAIR [illegible]	22 EST COST REPAIR TO E-1	23 USAGE [illegible]	24 OPERATING HRS TO DATE	25
	13-[illegible]		Ø7352	LPH7									62				Ø2	Ø683						
	13-[illegible]		6Ø815	LPH11									71				N1							

REPORT SYMBOL 4400-22

MHE 80 COLUMN TRANSMITTAL

RECEIPTS - FICP NORFOLK

FOR PERIOD: 1 JAN 1974 - 30 JUNE 1974

1 CARD	2 USN	3	4 UIC	5 ACTIVITY NAME	6 EQUIP CODE	7 TY EQP	8	9	10 RECEIVED FROM UIC	11-13 RECEIVED FROM NAME	14 YR MFR	15 SPCC USE	16 MFR CODE	17 ACQUISITION COST	18 COND CODE	19 REPAIR COSTS PAST YR	20 DOWN TIME	21 REPAIR COSTS CUMULATED	22 EST COST REPAIR TO ...	23		SP
	13-[?]5794								Ø7352	LP[?]7	62				R4							
	13-46323								6Ø815	LPD11	68				R2	28ØØ						

Enclosure (7), EXHIBIT B

SPCC 10490.1A
29 JAN 1975

REPORT SYMBOL 4400-22

DATE OF TRANSMITTAL

ON HAND - FICP NORFOLK

FOR PERIOD: 1 JAN 1974 - 30 JUN 1974

1 ARA	2 USN	3	4 UIC	5 ACTIVITY NAME	6 EQUIP CODE	7 TY EQP	8	9	10 CAPACITY	11 SLUE LIFT	12 SPL USE	13 SPL FTR	14 TR MFR	15 SPCC USE	16 MFR CODE	17 ACQUISITION COST	18 COND CODE	19 REPAIR COSTS PAST YR	20 DOWN TIME	21 REPAIR COSTS UPDATED	22 EST COST REPAIR TO E-4	23	24 OPERATING HRS TO DATE	25
	13-45322		00189	F[illegible]ORF									68				R4	0010						
	16-25[illegible]		001[illegible]	[illegible]ORF									69				02	0810						

Card columns 1–80

Enclosure (7), EXHIBIT C

APPENDIX I - NAVSEASYSCOM(06G3D/HTD) LTR, SER 14, DTD 26 JAN 77

NAEC-GSED-115

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
06G3D/HTD
10490
Ser 14

26 Jan 1977

From: Commander, Naval Sea Systems Command
To: Commanding Officer, Naval Air Engineering Center, Lakehurst N.J.
VIA: Commander, Naval Air Systems Command (AIR-53443)

Subj: Management Policy Concerning Periodic Load Testing of NAVSEA Cognizant Ordnance Handling Equipment

Ref: (a) NAEC ltr 92721/180:WG 13800 to NAVSEA of 2 Oct 1976 with NAVAIR endorsement 53443B:MG Ser 111 of 4 Nov 1976

1. Reference (a) requested a statement of this command's policy relative to periodic load testing of ordnance handling equipment.

2. Equipment under consideration consists of slings, beams, bands etc. listed in NAVSEASYSCOM INST 10490.2 and .7. The requirement for periodic testing is stated in NAVSEA OP-5 Volume 1 Chapter 8-6, OP-4 Volume 2, Chapter 2-80, NAVSEA OP-3347 Chapter 1-6 and SWOP H-1. Two testing facilities exist, at Weapons Stations Earle and Concord where the majority of the shipboard handling equipment is tested expeditiously on special machines on a continuing basis. It is not mandatory that the equipment be tested only at these two activities. Tests may be conducted by any ship, station, tender etc. having a satisfactory method for meeting the requirements shown in NAVSEA OD 44941.

3. The cost of shipping the equipment to and from a testing activity is born by the requesting activity, however the cost of conducting the tests at the two designated test sites is born by this command. Ship and shore facilities inspection teams are directed to check the equipment periodically to acertain if in fact it bears a tag indicating that it has been periodically tested and that the test interval has nct expired.

H.T. Decot
By direction

06G3D/HTD
10490
Ser 14

Subj: Management Policy Concerning Periodic Load Testing of NAVSEA Cognizant Ordnance Handling Equipment

Copy to:
NAVAIRENGCEN (92721)
COMNAVAIRLANT (532B21)
COMNAVAIRPAC (7515)
WPNSTA Earle (NWHC)

APPENDIX J - COMNAVAIRLANT LTR, SER 335B/5256

DEPARTMENT OF THE NAVY
HEADQUARTERS
COMMANDER NAVAL AIR FORCE U.S. ATLANTIC FLEET
NORFOLK, VIRGINIA 23511

11TU123712/11
Ser 335B/ 0256

From: Commander Naval Air Force, U. S. Atlantic Fleet
To: Chief of Naval Operations (OP-411)

Subj: Aviation Ordnance Safety Precautions Afloat; standardization of

Ref: (a) COMNAVSAFECEN ltr 43/pw 8023 ser 2093 of 14 Jul 1976
(b) NAVSEA OP-3347 "U. S. Navy Ordnance Safety Precautions"
(c) NAVSEA OP-4 "Ammunition Afloat"
(d) NAVSEA OP-5 "Ammunition Ashore"

1. Reference (a) recommended the convening of a conference, at the earliest practicable date, to investigate and resolve certain inconsistencies existing in various aviation ordnance safety precaution publications.

2. COMNAVAIRLANT concurs in the need for a timely standardization of the various publications that promulgate avaition ordnance safety precautions. In addition, it is desired that an effort to consolidate or reduce existing publications to an absolute minimum be undertaken; i.e., investigate the feasibility of a single publication for afloat and a single publication for ashore safety procedures. To accomplish the foregoing, the following is recommended:

a. Cancel reference (b) and incorporate the data into applicable sections of references (c) and (d).

b. Issue joint (NAVAIR/NAVSEA) publications for aviation ordnance in those cases where both commands establish requirements on similiar types of ordnance.

Example: NAVAIR 11-1-116/NAVSEA OD 16135 and NAVAIR 16-1-529/NAVSEA OP 3565

c. Assign a single systems command as cognizant agency for jointly issued publications.

d. Investigate the issuance of a single publication (OPNAV or joint) similar to the Naval Aircraft Maintenance Program (NAMP) manual (OPNAVINST 4790.2) that contains all technical data, procedures, forms, reports, etc. pertaining to aviation ordnance.

CNAL 335B/

Subj: Aviation Ordnance Safety Precautions Afloat; standardization of

e. Issue rapid action changes (RAC). Paragraph 3E reference (a) pertains.

3. Adoption of the above recommendations would not only standardize aviation ordnance safety precautions and various operational and reporting procedures, but would result in substantial monetary savings through a reduction in the numbers of volumns and the attendant management effort required to maintain them.

R. W. MCKAY
By direction

Copy to:
CNO (OP-05) (OP-03)
CHNAVMAT
COMNAVAIRSYSCOM (AIR-09E)
COMNAVSEASYSCOM (SEA-04H)
CINCLANTFLT
CINCPACFLT
COMNAVAIRPAC
COMNAVSURFLANT
COMNAVSURFPAC
COMNAVSAFECEN (43)
NAVWPNEVALFAC

APPENDIX K - NAEC TRIP REPORT NO. 68, 23 - 26 AUG 1976

TRIP REPORT #68

1. NAME OF TRAVELER(S)

WILLIAM GUDERIAN

2. DATE(S) OF TRAVEL

23-26 AUGUST 1976

3. ACTIVITY/CONTRACTOR VISITED

COMNAVAIRLANT/USS KENNEDY/NAS OCEANA

4. NAMES AND POSITIONS OF INDIVIDUALS CONTACTED

(See Attached Sheet)

5. PRINCIPAL PURPOSE OF VISIT

To conduct first phase of the Naval Aviation Armament Handling and Packing GSE Program Management Survey by covering both CV and NAS environments available at Norfolk area.

6. RESUME OF ACCOMPLISHMENTS

The following areas were investigated;
Management, Inventory Control of In-use assets, Maintenance Responsibility, Allowance/Allocations, Manning/Training, Supply Support, Configuration Control, Space/Facilities, and Documentation.

(Continued on enclosed sheets.)

7. COMMITMENTS MADE UPON NAEC (GSED)

(See Attached Sheet)

Copy to:
92721
92721

COMNAVAIRLANT

CDR. D. Rodgers	Weapons Readiness/Trg
LCDR J. Scoggin	Nuclear Readiness/Trg
LCDR T. Handcock	IMRL Officer
LT J. James	Conventional Ordnance
Mr. D. Walther	Code 325/Weapons
Mr. L. Renstrom	AMMRL Program Manager

USS KENNEDY (CV-67)

CDR Zwick	Weapons Officer
CDR Bollinger	AIMD Officer
LT Wood	Armament Handling
CWO Ryan	Air Gunner
AOC Kellman	Hangar Deck Ordnance
LT R. Stegman	Ships Gunner
LCDR Norcross	Ordnance Officer
ASCS Jackson	AIMD
ENS Ben Bayna	AIMD
AOC Gilbertson	Air Missile

USS INDEPENDENCE (CV-62)

CWO D.E. MILROY	"W" Division Officer

USS NIMITZ (CV-68)

LT R.O'Neil	Armament Handling

NAS OCEANA

LCDR Baxter	Nuclear Weapons Training
ASC Causbey	AIMD GSE
ASCS Potter	AIMD
LCDR Greenwell	Production Control

MAINTENANCE RESPONSIBILITY: Since OPNAVINST 4790.2A does not specifically address AHE, maintenance responsibility for many items of AHE was not assumed by the AIMD on board the USS Kennedy (CV-67). Issuance of CNO letter Ser 592D/723781 dtd 7 June 1976, (copy enclosed herewith) identified AIMD's maintenance responsibility for nine (9) categories and/or specific items of general handling equipment for which there was also no governing instructions. Two (2) items of ordnance handling equipment used by The Weapons Department, specifically the "Raymond Forklift Truck" and "Ordnance Equipment" created some concern for AIMD personnel:

a. The Raymond Forklift Truck is used exclusively within magazines within CV's and ammunition ships (AE's/AOE's). The Raymond Forklift is a commercial item managed and procured by NAVSUP through SPCC. The USS Kennedy

has an authorized COSAL allowance of 26 items, all sub-custodied to the Weapons Department from the ships supply officer. Maintenance was previously accomplished by the ship's Engineering Department (Electric Shop) since the Raymond Forklift is considered ship's equipment (non-IMRL). Commercial maintenance manuals are employed for all intermediate/depot level maintenance functions because Navy Maintenance Plan , Operator's Manual with Spare Parts Lists, or OLSP's have never been prepared on the Raymond Forklift. NAVSEA Format MRC's are available, however, but these cover only pre-operational and preventative maintenance functions. General Service ratings (EM and MM) are specified on the MRC's because the ships engineering departmentwas previously responsible for all maintenance.

COMMENT: Introduction of the Raymond Forklift into the AIMD will undoubtedly create some technical as well as administrative problems. Recommend that this item of MHE be specified within the ships IMRL with special allowance for the Weapons Department for 26. For NAVAIR GSE maintenance coverage is highly recommended.

b. The term "Ordnance Equipment" was not defined within the CNO ltr. It is presumed that ordnance equipment was to include the entire gamut of weapons handling equipment including both IMRL and COSAL listed items. The majority of beams, carriers, and various lifting deviees used for weapons/missile components, require the minimum of organizational and intermediate level maintenance. However, load testing per OP-5/OP-3347 is required on all such items. About 200 such items are periodically (18 month cycle) transferred to the shipyard at Portsmouth, VA. for weight testing. The shipyard has been continuously charging for the development of specific testing procedures for each item of NAVSEA or NAVAIR cognizant equipment, thus being completely oblivious to the existance of applicable testing specifications for most equipment. The costs involved in completing this testing requirement has been excessive.

COMMENT:

Recommend that COMMNAVAIRLANT specify NWS Yorktown, and COMNAVAIRPAC specify NWS Seal Beach to accomplish all such testing for CV portable armament handling equipment which is not included in the IMRL. The ship's AIMD should be responsible for load testing all IMRL listed AHE.

ALLOWANCES/ALLOCATIONS: There are no critical shortages of handling equipment aboard the USS Kennedy (CV-67). However, many problems are generated due to the hetergeneous mixture of various categories of ordnance handling devices ranging from ground support equipment, tools, etc. to mobile materials handling equipment. No particular category of equipment has ever been clearly defined since all such equipment falls under the technical cognizance of either NAVAIR, NAVSEA or NAVSUP.

Due to the distinct differences between the arrangement systems employed by each systems command, it was not surprising to note that each type of equipment was managed differently, and equipment allowances are a direct product of the management systems employed by each cognizant systems command. It was very

disappointing to note that there was marked difference in the shipboard allowances for equipment issued by the same systems command. For example: Many items of NAVAIR cognizance GSE are not listed in the IMRL. (Therefore, all such NAVAIR equipment remains no maintenance support from the AIMD). Further, many items of NAVSEA equipment is considered part of the ship and therefore, not listed in the COSAL.

The majority of Weapons Handling Equipment is allowed to the ship via the IMRL or the COSAL. But the COSAL is divided into a number of individual allowance lists. Most NAVSEA cognizant ordnance handling equipment (OHE) may be categorized into (2) areas: Firstly, that equipment allowed the ship via NAVSEA INSTRUCTION 10490.2, consisting mostly of portable OHE to handle weapons containers and FIUL's within weapons magazines. Secondly, ship's gear (i.e. "C" - grabs, stauchions, hold downs, etc.) allowed the ship via initial outfitting allowances. Both the aforementioned first and second categories of OHE is allowed the ship via the COSAL; yet not all such OHE is included in NAVSEA INSTRUCTION 10490.2.

NAVAIR cognizant armament handling equipment (AHE) may be divided into (1) AHE allowed the ship via the IMRL as "tailored" for the particular ship by the Type Commander from the ADMRL, and (2) AHE allowed the ship via the COSAL via initial outfitting allowances. The later (2) category consists of items of PGSE provided the ship in support of various missile systems by Point Mugu.

"H" - Gear for handling nuclear weapons falls under both NAVSEA and NAVAIR cognizance. All such equipment as allowed the ship's "W" - Division via a "special" COSAL allowance managed by the Nuclear Weapons Supply Annex and is always "Weapons" vice "Aircraft" oriented.

NAVSUP cognizant forklifts used in the weapons magazines are allowed to the ship via the COSAL and managed in accordance with SPCC INSTURCTION 10490.1A

COMMENTS: Generally speaking, the entire area of weapons handling equipment allowances was considered the most obvious indicator of the overall lack of centralized control over all aviation weapons support equipment. A situation which involves employment of 5 separate allowance lists in order to equip the Weapons Department with all their required weapons support equipment can never be properly managed. A such lists should be conduced into 2 lists: List No. 1. consisting of armament ground support equipment and related weapons assembly and checkout equipment. All such equipment to be contained within the IMRL and listed wither against the aircraft, missile system, gun system, or ship's weapons department. List No. 2 should consist of both OHE or MHE required in support of the weapons department.

NAS Oceana: NAS Oceana has two ordnancemen (AO3's) who are responsible for performing the maintenance on all armament GSE, including the HLU-1961E. Although the HLU-196/E MRC's require such maintenance to be performed by AS's, the AO's perform all maintenance required. Spare parts for the HLU-196/E have been a problem because Oceana Supply has not been forwarding request stubs due to the relatively small demand on HLU-196/E parts. Oceana GSE is required to place all skid adapters onboard the skids ready for loading for the squadron users. (This should be the responsibility of the squadron users.)

NAS Oceana has custody of a number of AOU-400's with Aero 21C skids for which there is no allowance established. These items were received aboard because they were used in conjection with a Test and Evaluation project. Maintenance responsibility over these items was a matter of concern.

APPENDIX L - NAEC TRIP REPORT NO. 75, 20 - 24 SEP 1976

TRIP REPORT NO. 75

NAME OF TRAVELLER: WILLIAM GUDERIAN

DATES OF TRAVEL: 20-24 SEPTEMBER 76

ACTIVITY/CONTRACTOR VISITED:
COMNAVAIRPAC
USS CONSTELLATION (CV-64)
NAVAIREWORKFAC NORTH ISLAND
PACMISTESTCEN

NAMES & POSITIONS OF INDIVIDUALS CONTACTED:

USS CONSTELLATION

CDR EDWARD CHELTON	AIMD OFFICER
CDR EYLER	WPNS OFFICER
LCDR S. MULLIGAN	AVIATION ORDNANCE
LT J. BURNS	W DIVISION OFFICER
LT LINSAY	WPNS HANDLING OFFICER
ASCM T. LEMMOND	DIVISION CHIEF, 900WC
AO1 J.E. DRAKE	DIVISION CHIEF 710 WC
AO2 PEREAU	710 WC (AIMD)

COMNAVAIRPAC

LCOL MILLER	AIRCRAFT MAINT
MR. SMITH	IMRL COORDINATOR
MR. "SCOT" ALEXANDER	IMRL COORDINATOR

PACMISTESTCEN

MR. F. STANDARDI	CODE 1162
MR. BOB TWIFER	NASU REP
MR. JOHN KAPIGIAN	ARMAMENT HANDLING DIV.

PRINCIPAL PURPOSE OF VISIT:

To conduct first phase of the Naval Aviation Armament Handling and Packaging GSE Program Management Survey by interviewing Weapons/AIMD personnel onboard the USS CONSTELLATION (CV-64), NAVAIREWORKFAC North Island, COMNAVAIRPAC and PACMISTESTCEN Pt. Mugu.

RESUME OF ACCOMPLISHMENTS:

A. Initially meet with the Aviation Intermediate Maintenance

Department Officer to discuss purpose of visit and request assistance in identifying problems with AHE. The GSE 900 Division Chief (ASCM T. Lemmond) was assigned to supply pertinent information and to coordinate all required contacts with cognizant AIMD personnel.

B. Personnel Manning of GSE 900 Work Center: OPNAVINST 4790.2A leaves too much latitute regarding the technical qualifications of AO personnel to be assigned to the 900 WC. For example: The Weapons Department is required to support the personnel requirements of the 900 WC of the AIMD. Three rated AO personnel are required to perform maintenance functions on Armament GSE. The Weapons Department has been assigning (TAD to AIMD) three of their least qualified personnel, i.e. AA's or AN's. The AIMD contends that three good men are necessary to perform required maintenance functions on armament GSE and all such assigned personnel should be AOAN's or higher rate/rating. The situation was temporarily solved, nowever, by the AIMD and Weapons Department by assigning people when they report onboard ship. (This situation was in direct contrast to the USS J.F. KENNEDY who had no TAD Weapons Department assigned to the 900 WC of AIMD).

C. Avialability of Equipment vs. Established Allowances: The USS CONSTELLATION has more Aero 12C's and Aero 21A/C's than actually required by operations. Once the IRRP capability is acquired via SHIPALT, there will be a significant reduction in the number of Aero 12C's required. AIMD contends that 30% of all equipment is often abused by the users and broken/inoperable units are not reported to AIMD. The foregoing applies to both Squadron and Weapons Department equipment.

D. Custodial/Sub-Custodial Management of AGSE: The Weapons Department has not and will not sign custody cards for any equipment listed on the Ship's IMRL. Although recognized as basic non-compliance with the requirements of OPNAVINST 4790.2A, by their not signing the custody cards, the Weapons Department cannot be held responsible for inventory control, accountability, etc. In-use asset reporting is often incomplete and inaccurate as a result.

E. Responsibilities of the 710 Work Center Compared to the 900 Work Center: The functional responsibility of the 710 WC is the testing, repair, and minor modification of all Aircraft Armament Equipment which is or can physically be attached to the aircraft. All such equipment serviced is used or allows for the suspension, releasing, ejecting and/or arming ordnance stores.

In addition to the foregoing, the M61A1 Gun System, LALS, and the Aero 61B Handling Band is maintained by the 710 Work Center. The 710 WC is one of 13 Work Centers that comprise the Avionics Armament Maintenance Division (IM-3).

On the other hand, the 900 Work Center (GSE) is responsible for performing maintenance on all Armament GSE which is, or may be classified as support equipment for aircraft or air-launched weapons systems. All such equipment serviced includes weapons skids, transporters, bomb hoists, skid adapters, bomb trucks, and all other armament handling equipment listed on the IMRL. The only exceptions are LALS, Aero 61B, and missile handling strongbacks. These items are listed in the IMRL but are not maintained at the 900 WC.

F. Stowage Problems: All Raymond Reach Forklifts are stowed on the Mess Deck. Practically all the GSE held at the 900 WC is stowed on the hangar deck, and 50% of all the GSE is AHE. The remaining AHE is stored in the magazine areas or inert stowage spaces. Adapters, skid handles and various smaller AHE components are least accessible for the performance of periodic maintenance.

G. Spare Parts Problems: Typical complaints as noted via visits to USS KENNEDY, NAS Oceana, etc. Pins, belts, and other small parts. It was recommended that an AVCAL be established for high useage quick-release pins. Due to computer being down at Ships Supply, the Ships Supply System has not been responsive to parts requests.

H. Maintenance Problems: Weapons Department does not deliver equipment to AIMD to have corrective maintenance performed. Many items are stowed on the 6th deck, and maintenance must be performed at AIMD located on the hangar deck. Work load planning ineffective because it isn't possible to plan unscheduled maintenance functions. Weapons Department personnel perform only daily checks and no preventative or corrective maintenance functions on AHE. However, maintenance of the bomb elevators has been assigned to the Weapons Department in lieu of the Engineering Department.

I. Weapons Department Allowances: Enclosure (1) contains a list of items not allowed the ship via an IMRL or NAVSEAINST 10490.2. (A consolidated allowance list is therefore recommended as a possible remedy to this problem).

J. Load Testing and Calibrating of AHE: Aero 61B Slings are load tested by AIMD 710 WC with no problems being reported. Bomb Hoists and Bomb Trucks are tested at AIMD 900 WC. The Weapons Department performs some load testing of their beams, carriers, and strongbacks using the procedures outlined in NAVSEA OP 3347 and NAVSEA OD 44941. However, only about 50% of the portable OHE had been certified as tested due to the lack of specialized test equipment and related procedures. Facilities available at NWS Concord, NARF North Island, or at the Bremmerton Naval Shipyard are not used.

K. Visit to PACMISTESTCEN, Pt. Mugu: Conferred with personnel of armament section concerning the preparation of a technical data package for inclusion of NAVAIR portable ordnance handling equipment into NAVAIR 17.1.114. PACMISTESTCEN has 21 items under their technical cognizance which should be included in the manual.

COMMITMENTS MADE UPON NAEC/GSED: NONE

W. GUDERIAN

Copy to:
92721 w/encl
92723 "
9272 "
927 "

APPENDIX M - NAVWEPENGSUPACT LTR, SER ESA-1182: WPH, DTD 13 JAN 1977

NAEC-GSED-115

DEPARTMENT OF THE NAVY
NAVAL WEAPONS ENGINEERING SUPPORT / CTIVITY
WASHINGTON NAVY YARD
WASHINGTON, D.C. 20374

IN REPLY REFER TO
ESA-1182:WPH

JAN 13 1977

From: Director, Naval Weapons Engineering Support Activity
To: Commander, Naval Air Systems Command (AIR-53443)
Commanding Officer
Naval Air Engineering Center (9272)
Lakehurst, New Jersey 08733

Subj: Naval Aviation Armament Handling and Packaging Program Management Survey; information concerning

Ref: (a) AIRTASK A534534B/1842/7534001840
(b) NAVAIR ltr 53443 KEN/S Ser:081 of 22 Jun 1976
(c) NAVAIR ltr 53443:KEN/S Ser:087 of 13 Jul 1976

Encl: (1) AHE (Armament Handling Equipment) Field Survey Data Package

1. In compliance with references (a), (b), and (c), enclosure (1) is submitted and completes Task No. 1 of reference (b).

A. G. LA[illegible]
By direction

AHE

(Armament Handling Equipment)

Field Survey Data Package

Enclosure (1)

USS JOHN F. KENNEDY (CV-67)

August 16, 17, 18, 19
23, 24, 25, 26, 27

Weapons Department

CDR Zwick	Department Head
LCDR Norcross	Ord nance Officer
LT Wood	Armament Handling Officer
CWO Ryan	Air Gunner
AOC Kellman	Hangar Deck Ordnance (G Div)

Aircraft Intermediate Maintenance Department

CDR Bolinger	Department Head
LCDR Hite	Assistant AIMD Officer
ENS Bayma	IM4 Division Officer (GSE)
ASCS Jackson	Quality Assurance Officer (Acting)
ASC Rogers	IM4 COP

1.1 The major problem with AHE (Armament Handling Equipment) is that it is not covered in 4790.2A as to maintenance responsibility. This leaves much latitude for individual interpretation. This can be exemplified by the different maintenance policies at different stations and ships. Example: Aboard ship A AIMD does all maintenance; ship B AIMD does all maintenance on selected items and corrective maintenance on the other line items. The weapons Department does all preventive maintenance and other items are maintained totally by the Weapons Department.

1.2 PROBLEM

Storage Facilities for AHE When Not in Use: Equipment Storage presents a major problem aboard ships. There are great differences in spaces alloted for this purpose. One CV has designated storage spaces that are not readily accessable on the 02 level in overhang voids. Aboard another ship some storage is on the 3rd deck with limited access for storing and removal of equipment when needed. During major weapons exercise, 300-500 manhours are required to configure required equipment.

1.3 PROBLEM

Preventive Maintenance (Periodic) and Corrosion Control on equipment in storage is most difficult if not impossible due to stacking of equipment.

1.4 PROBLEM

Differences exist between NTPI requirements and MRC Decks for load testing of equipment. After equipment has been tested in accordance with MRC, then inspection teams require testing in accordance with OP-5.

1.5 PROBLEM

3M Documentation is not being accomplished when maintenance is performed by Weapons Department as they do not report under the NAMP but ships 3M system.

1.6 PROBLEM

Supply Support (Bit & Piece needed to aviod work stoppage) AWP: Only about 5% of items requisitioned are received in the time frame stated for priority AWP.

1.7 PROBLEM

Training on major NAVAIR weapon systems, such as skids, trailers, and hoists is not available to maintenance personnel.

This is because responsibilities have not been identified as to rating level required to perform specific maintenance.

At the present time there is schooling (NAMTRADET 3030) available on HLU 196 for "AS" personnel in NAS Jacksonville. The Weapons Department reports that AO's have received no training on any type equipment, specifically organizational or intermediate maintenance training. 4790.2A dictates support personnel be provided to AIMD from supported departments. "I" and "O" level training is definitely required to maintain material readiness.

1.8 PROBLEM

Manning Levels: The command has no billets assigned to perform maintenance on armament handling equipment. Present MRC Decks indicate that the AO rating is to perform maintenance on AHE with the exception of the HLU 196 which is assigned to ASM rating. OPNAV letter of 7 June 1976 states AIMD is responsibile for ordnance equipment with no compensation for additional manpower. During this survey 198 SEC's to update the Aero 21A to Aero 21C were received. These will require 9 manhours for each change totaling approximately 3 manyears of maintenance effort.

1.9 PROBLEM

Supporting Documentation: NAVPERS 1000/2 identifies no billets for maintenance functions.

1.10 PROBLEM

Loading Tests: Special tools and equipment for load testing AHE are not IMRL items (i.e. MR-86 shape not an IMRL item required for test of Aero 61B bands).

At present MRC Decks are not available to give load testing requirements (Aero 61B hoisting bands).

MRC Decks need revision as cards indicate AO ratings required to perform load testing vice AS rating. (Refer to paragraph 1.7.)

Review static test device vice dynamic testing procedures.

Quality assurance representative AO or WEPS to witness and certify load testing should be so designated in writing, adequate training should be provided. (E-6/E-7 level considered adequate pay grade for responsibility.)

1.11 PROBLEM

Configuration Control: Responsibility of configuration to meet user mission (SQD) requirements has not been identified.

Identify source that gives mission configuration for given weapons.

Due to changing mission requirements the configuration of AHE to handle specific weapons requires rapid change. This responsibility once identified should be with the user as no direct maintenance action is required to comply. Normally only pin/bolt removal/replacement and adapter changes are required.

1.12 PROBLEM:

IMRL Responsibilities and Control: There are many items of equipment that are not listed in activities IMRL that require I-level maintenance, i.e. fork trucks, (26 electric 2000 lbs.)

These 26 fork lifts are not accounted for in the IMRL. Supply submits an annual report to SPCC giving cost of repair and hour usage on SPCC form, but items are maintained by AIMD.

The usual responsibility hassle for custody/sub-custody of items and preposition codes.

1.13 PROBLEM

Publication on Most AHE Are in Need of Updating: Many publications reviewed are obsolete and do not reflect latest configuration of equipment. This has caused problems in maintenance. Revised publications and MRC Decks should be published as to maintenance level and rating required to perform each maintenance function.

1.14 PROBLEM

Magazine Handling of Walleye Missile Containers: The present pneumatic hoist does not have enough clearance between the container and the lifting hoist to allow stacking. This requires man handling of containers to stow, which uses excessive manpower.

1.15 PROBLEM

Phoenix Missile Handling Equipment: The ADU 400 (PGSE) does not have a MRC Deck. Maintenance is causing a problem. All units aboard are down for the same part, a crank mechanism. UR's have been submitted to CFA with no response.

1.16 PROBLEM

Maintenance Responsibility Identification: OPNAV 4790.2A Volumn II, Chapter 14, covering GSE, referes to skids, dollys, carts, and trailers, but does not state armament/ordnance handling. This has been brought out as a point which has been interpreted in different manners, depending on the local situation.

1.17 PROBLEM

Custody Control of Handling Equipment: The AIMD maintains custody records of all AHE list in the IMRL. PGSE items that are not listed properly controlled, the ADU 400 used with Phoenix missile for example. Other items are in possession of O-level activities and not accounted for on supporting activity IMRL.

1.18 PROBLEM

Equipment allowances are predicated on using activities allowance with no spares for back up when equipment in repair or AWP.

NAS OCEANA

August 20, 30, 31
September 1, 2, 3

CDR Wetmore	AIMD Officer
LCDR Hunter	Assistant AIMD Officer
LCDR Greenwell	Maintenance Control Officer
ASCS Potter	GSE Division Officer, Acting
ASC Causby	GSE Division CPO
AO2 Spindler	AHE Repair
LCDR Baxter	FASOTRAGRULANT
GMGC Hamby	Weapons Department
AO1 Rough	Weapons Department
AO1 Halterman	Weapons Department

2.1 PROBLEM

Supply Support: Long lead time is experienced in bit and piece support causing excessive AWP time. Many items are procured as local purchase for HLU 196. There are 50 outstanding requisitions in supply.

2.2 PROBLEM

Prepositioning Codes Need Review: A review of P/P codes is needed. Many items that are seldom used are P/P coded P vice E, i.e. certain adapters.

2.3 PROBLEM:

Manning: The allowance for the Aero 21 skid is approximately 50% filled.

2.4 PROBLEM

Publications: There are no MRC Decks or Maintenance Manuals on the PGSE ADU 400-399, the Phoenix missile handling equipment.

2.5 PROBLEM

Allowances:

2.5.1 Requirements are determined by the type commander during IMRL review conference. The allowance is usually predicated on a certain percent of squadrons being deployed at a given time. This does not allow for equipment being in a down-status awaiting maintenance (AWM) or awaiting parts (AWP_ required for corrective maintenance.

2.5.2 Equipment is located on stations that are not listed in the IMRL that requires AHE for support (Phoenix missile adapters is a good example).

2.6 PROBLEM

Many items (adapters) of AHE were not inventoried during annual inventory. These items are usually retained by the using activity which causes errors in the total, on hand, asset count.

2.7 PROBLEM

Training: Maintenance personnel are not qualified for the Aero 33, Aero 21, HLU 196, and Phoenix missile PGSE.

2.8 PROBLEM

Aero 51B Trailers: 38 assigned, 25 usable. Due to shortage of straps these will not meet the ordnance safety handling requirements.

2.9 PROBLEM

Usage Configuration Control: Configuration control is accomplished by AIMD GSE vice user. This creates an excessive workload on an already under manned work center.

2.10 PROBLEM

Carriers and Slings for Weapons Department: An allowance has not been established. Some locally manufactured slings are used which have been load tested by PWD.

2.11 PROBLEM

Material Handling Equipment used by Weapons Department: A limited number of vehicles have been configured to meet the safety requirements of P-300 for explosives handling equipment. When the MHE/AHE is in a down status this creates a shortage as no back up equipment is available.

USS CONSTELLATION (CV-64)

September 14, 15, 16, 17

CDR Chelton	AIMD Officer
LCDR Mulligan	Ordinance Officer
LT Lindsey	ARM Officer
ASCM Lemmond	GSE Officer (Acting)
AO1 Drake	Workcenter 710

3.1 PROBLEM

Aviation Rate Performing Shipboard Bomb Elevator Maintenance: All maintenance requirements on elevators are the responsibility of the Aviation Ordnance Rating, with the exception of electrical troubles which is the responsibility of the electricians mate EM.

3.2 PROBLEM

Automotive gasoline storage has not been properly identified. The problem is known by the NAVAIRSYSCOM 537 personnel.

3.3 PROBLEM

Training: There appears to be a lack of trained personnel for maintenance of AHE AIMD.

3.4 PROBLEM

AHE in a AWP status uses valuable spaces assigned to GSE Division. This equipment should be off loaded and replaced with servicable units.

3.5 PROBLEM

Custody Control: There is a lack of coordination between AIMD and Weapons Departments which causes problems in inventories.

3.6 PROBLEM

The identification of the responsibilities by department, division, and work center needs to be assigned to insure proper maintenance and custody control of all equipment.

NAS MIRAMAR

September 20, 21, 22, 23, 24

CDR Roach	AIMD Officer
CWO Gray	GSE Officer
ADCS Hyland	Weapons Department
AO1 Mantta	Armament Equipment
CWO Hildbreth	Armament Division Officer (AIMD)

4.1 PROBLEM

Split Responsibility for I-Level Preventive Maintenance: This function is being performed by the station Weapons Department which is monitored by GSE, which provided schedule of required inspections.

4.2 PROBLEM

Failure to Clearly Identify Maintenance Responsibility: Local interpretation is as follows: GSE performs all maintenance on Aero 33, Aero 21, Aero 51B, and Aero 47 and limited maintenance on the HLU 196 (Engine only). All other equipment is maintained by work center 710 (Armament equipment) which maintains all airborne equipment and monitors the armament equipment pool.

4.3 PROBLEM

Storage Area: The AHE storage area is a long distance from the flight line or loading area. When AHE is needed the equipment must be loaded on a flat bed truck moved to using area, unloaded, used, reloaded on truck, and returned to storage area and restowed.

4.4 PROBLEM

Inadequate Allowance of Equipment: Sufficient Aero 21 skids are not on hand to meet operations, therefore when a using activity has completed its use, the equipment is returned to Weapons Department for reissue causing undue delay in flight operations.

4.5 PROBLEM

Obsolete Equipment: Several items of obsolete/prototype equipment are retained on hand. These items are not used and should be disposed of.

4.6 PROBLEM

F-14 Weapons Rails Stowage: At present, rails are stowed in work center taking up much needed maintenance space. This method of stowage makes it difficult to select desired configured rail.

4.7 PROBLEM

Custody, Control, and Responsibility: Undetermined exactly what line item of AHE is the responsibility of which division of what department with the station.

4.8 PROBLEM

Training: AHE is not adequately covered in AO, AS, and GSE managers schools.

4.9 PROBLEM

OLSP's are needed to insure that all aspects are covered including, but not limited to training, logistics support, etc.

4.10 PROBLEM

Allowances are computed against deck load which does not make allowances for other activities requiring support, i.e. El Centro, Fallon, Cubi Point, San Clemente, etc.

4.11 PROBLEM

Parts Support: Parts support has proven to be insufficient in that many parts are bought open purchase to meet operational commitments.

4.12 PROBLEM

Corrosion Control and Preservation/Depreservation Manual: A manual is required that covers GSE/AHE corrosion control and preservation/depreservation methods and responsibilities.

4.13 PROBLEM

Facilities: Present facilities are not adequate to provide for increased requirements (maintenance and storage).

4.14 PROBLEM

Stowage: If parts are not available when equipment is inducted into GSE for corrective maintenance, the equipment is returned to Weapons Department to be stowed until parts are received and repair action scheduled.

MCAS YUMA

September 27, 28, 29, 30

CDR Rhodes	AIMD Officer
CAPT Helm (USMC)	Assistant AIMD Officer
CAPT Schroyer (USMC)	Armament Division Officer
AOCS Jenkins	NCOIC Armament Division
MGYST Armstrong	NCOIC GSE Division
SSGT Steller	Assistant NCOIC GSE
CAPT Ellis	OIC GSE Division
MSGT Muender	Weapons Division
GYSGT Stewart	Weapons Division
G4SGT Turnbow	Weapons Division
SSGT Manchester	Weapons Division

5.1 PROBLEM

Personnel Allowances: Equipment assigned to support Navy activities is not common to USMC operation. Linkless loaders were pushed to AIMD Armament Division by Type Commander to support Navy Squadrons, 1 loader, 4 transporters, 2 conveyors. USMC is not trained in the equipment. The Navy has 2 men assigned to Armament, on assistant Division Officer (E-8), leaving no one to support the subject system.

5.2 PROBLEM

Maintenance: GSE Division maintains the Aero 51B trailers, MD-7, and SATS Loaders. Other items are maintained by either Armament Division or PWD. Some equipment that is maintained by PWD ashore is maintained by USMC units when deployed.

5.3 PROBLEM

SATS Loaders Readiness: Of 19 loaders assigned, only 11 are ready for use (RFU). 10.5% are AWM and 31.5% are AWP, which is below the anticipated normal.

5.4 PROBLEM

Storage Facilities: No inside or covered storage for RFI equipment that is not in use.

5.5 PROBLEM

Facilities: Aero 51B trailers are parked in the open which is subject to heavy sand/wind conditions.

5.6 PROBLEM

Maintenance: AIMD performing depot level maintenance on SATS loader engines.

5.7 PROBLEM

Readiness of Equipment: Many line items will not meet the safety requirements for explosives handling equipment, such as lack of nomenclature, brakes not working, or no running lights.

MATWING ONE STAFF NAS OCEANA

October 26, 27
November 5

CDR Lebrecht	Maintenance Officer
AOC Anderson	Wing Ordnance Chief
Mr. Crain	Standard Arm Rep. Pt. Mugu

6.1 PROBLEM

Standard Arm Handling Equipment: Equipment has no nomenclature tag or serial numbers assigned. Problems that existed before the ILSMT conference of 20-22 April 1976 are still present. Some action chits that were written and assigned have not been answered at the present time. There is a lack of inventory control, no MRC Decks, and weight testing responsibility not identified.

6.2 PROBLEM

Equipment should have identification tags attached that will give the modifications/SEC installed in equipment.

6.3 PROBLEM

Personnel: Squadrons are required to send ordnance men to magazines to build-up required weapons. This is normally accomplished by the weapons department on many other stations.

6.4 PROBLEM

HLK 247-248 Adapters: The quantity of adapters aboard is not adequate to meet the requirements on onboard squadrons. There are only three sets aboard; 1 set in the FRAMP, 1 set at the FASOTRAGRU and one set to be shared by all using squadrons.

6.5 PROBLEM

Aero 61 Band Sets: Allowances should be tailored to meet squadron/FRAMP requirements. There are not enough assigned in station IMRL HLU 196 hoist. Station has 10 units aboard which are managed as prepositioned coded "E" equipment rather than P/P code P as assigned due to insufficient assets.

6.6 PROBLEM

Small Flat Bed Trailer for Use in Handling Practice Bombs, Fuses Adapters, and etc: Many squadrons have locally manufactured or modified trailers. These do not in most cases meet the safety requirements criteria.

VA-42 A-6 Replacement Squadron NAS OCEANA

October 27, 28

CWO Hanley	Division Officer
AOC Frost	Ordnance CPO
AO1 Thompson	
AO1 Raeder	
Mr. Boyle	FRAMP Ordnance Instructor

7.1 PROBLEM

Loading Shed: Used for build-up of practice weapons needs 1-1/2 ton hoist and monorail. This would lower the number of skids and trucks required.

MHE (Material Handling Equipment): Fork lifts assigned in a questionable state of safe and reliable operating condition. Adapters: Need special adapter for handling 2000 pound bombs.

7.2 PROBLEM

Adapters: There are not sufficient adapters in the station IMRL to support all squadrons with the required P/P coded P items.

7.3 PROBLEM

Small trailer is needed for movement of practice bombs, fuses, tools, adapters, and other required equipment.

VA-176 NAS OCEANA/CV-66 13 A-6 Aircraft

November 4

LTJG Elliott Division Officer
AOC Strong Division CPO

This squadron makes full use of the HLU-196 when possible.

8.1 PROBLEM

Aero 7B Ejector Rack: Need an adapter for using the HLU-196 with this rack.

8.2 PROBLEM

Aero 61 Bands: Shortage on station of subject bands.

8.3 PROBLEM

AWM 54 Stray Voltage Test Set Adapter Cables: Center contacts. This contact continually becomes loose during usage.

8.4 PROBLEM

Fuses: The AWM 54 TS when used on the A-6 aircraft, fuses are blowing at an excessive rate.

8.4 PROBLEM

Availability of Other Test Sets: Sets are received in less than good working order and not complete when received from supporting activity (AIMD).

8.6 PROBLEM

Publications: Changes to publications are taking an excessive amount of time to be received when the ship is deployed from July to October.

8.7 PROBLEM

Equipment: Aircraft Wing Pylon received from NARF without latest configuration. This item not usable.

Fighter Wing One NAS OCEANA

October 26
November 1, 5

CDR Moore	Maintenance Officer
LT Freeman	Avionics Officer
CWO Burns	Ordnance Officer

9.1 PROBLEM

Prime Equipment: Skids, trailers, and trucks. The number of assets authorized supporting activity the total quantity is not adequate to meet all squadrons and training requirements.

VF 101 Replacement Squadron F-14 ACF7

NAS Oceana

October 28, 29

LTIG Brissette
AOC Earl

10.1 PROBLEM

MSTS Sparrow Test Set: Insufficient quantities of subject test sets to meet squadrons needs. Item must be sent to Naval Air Rework Facility, North Island for Calibration. Need calibration site on east coast near aircraft support site (NARF Norfolk or NAS Oceana).

10.2 PROBLEM

Inventory Control: Adapters that were pushed to squadron during initial outfitting have not been picked upon support activity IMRL.

10.3 PROBLEM

MHE: Phoenix Missiles moved on Aero 51B trailers require fork lifts to unload. Due to the limited quantity of fork lifts required, ones have to be borrowed from any source that may be available creating delays in unloading required missiles.

10.4 PROBLEM

Allowances: Line items of support equipment appear in squadron IMRL that are not required in support of assigned aircraft creating a conflict in IMRL management.

10.5 PROBLEM

Allowances: Line items of support equipment are preposition coded that is deemed to be "O" level equipment.

1. Positive launch check P.N. A51S64050-1
2. Sparrow launch pins FSN 1730-00-567-3693

10.6 PROBLEM

MHE: There exists a shortage of pickups and fork lifts at the PWD to meet total ordnance handling requirements which meet safe ordnance handling.

NAEC-GSED-115

10.7 PROBLEM

Maintenance: Pneumatic motor MS 22LDCR. No I level repair capabilities NAS AIMD, (used for loading and unloading M616 and Phoenix missile racks).

VF-143 NAS OCEANA F-14 Aircraft

November 2

CWO Beyer
AO1 Pinderton

11.1 PROBLEM

Configuration: UR's relating to LALS are not being responded to in a timely manner.

11.2 PROBLEM

Readiness/Parts: Availability of conveyer/transporter assemblies is 25% or less when squadron was deployed maintenance of subject equipment needs improvement (8 aboard, 2 RFU).

11.3 PROBLEM

F-14 Weapon rail cables have no weight testing in MRC Deck ordnance division deems this a necessary requirement.

11.4 PROBLEM

Components of missile system does not have "I" level maintenance established (missile cooling pump).

NAEC-GSED-115

VF-31 NAS OCEANA F-4 Aircraft (12)

November 2, 3

12.1 PROBLEM

Availability of Equipment: The supporting activity does not have ample equipment to assign prepositioned equipment on a semi-permanent basis as PP coded P. Most equipment is used and returned to controlling custodian upon completion of usage.

12.2 PROBLEM

Storage: Storage for ready for use airborne equipment is very limited.

12.3 PROBLEM

Reliability of Test Equipment: ASM-20B sidewinder system tester. The pins are not adequately secured within the cannon plug attached to the tester. UR's have been submitted but the problem still exists.

12.4 PROBLEM

Allowances: Portable Nitrogen purge stand has been deleted from original IMRLS. Weapons personnel would like to have this item as a time saver during operation.

APPENDIX N - INTER-OFFICE MEMO FROM AIR-534 TO AIR-417

53443:KEN/K
Ser

MEMORANDUM

FROM: AIR-534
To: AIR-417

Subj: Armament Handling Equipment (AHE) Conference

Ref: (a) NAVAIRSYSCOM ltr 53443:KEN/S Ser 052 of 15 Jan 1976
(b) COMNAVAIRSYSCOM msg 042310Z Feb 1976

Encl: (1) List of Attendees
(2) Agenda Items
(3) Action Chits

1. References (a) and (b) requested that interested commands and activities submit agenda items for the subject conference and established a conference at NAVAIRSYSCOM on 18 and 19 February 1976. The conference attendees are listed in enclosure (1).

2. The conference brought into sharper focus the problems associated with AHE afloat and ashore. In particular, it highlighted the need to develop and promulgate a total management system that will result in more effective inventory control and maintenance support. CNAL and CNAP representatives were very concerned and expressed a desire to strive for a methodology which would result in one comprehensive management system. The accomplishment of this system is intimately related to policy on performance of AHE maintenance that should be compatible with the provisions set forth in OPNAVINST 4790.2 and discussed in Agenda Item No. 7 of enclosure (2).

3. Enclosures (2) and (3) list the agenda items and the action chits that were made a part of the subject conference. Items numbered 1, 3, 4, 7, 10, 11, and 12 have been designated as AIR-417 congizance. Agenda items 5 and 8 were assigned to CNAL/CNAP on a special case basis. All the remaining (2, 6, 9, 13, 14, 15, 16 and 17) will be tracked by cognizant AIR-05 codes and will be monitored by AIR-53443. These agenda items and action chits will be processed and acted upon by the cognizant codes as reflected above. There will be no formal minutes sent to the attendees since the required action will be taken by separate correspondence. The principals of the meeting will, in addition to the above, be contacted by phone and advised about this matter on a personal basis.

4. The conference was considered to be beneficial to all participants and contributed to a better overall understanding of the problem areas of concern to Armament Handling Equipment Acquisition, Management and Support. The overall success of this conference will depend on the effective follow-up and accomplishment of the tasks assigned in the action chits.

ARMAMENT HANDLING GSE
CONFERENCE - NAVAIR
18-19 FEBRUARY 1976

	NAME	CODE	TELEPHONE NO.
	R. E. ALBRECHT	NAVAIR (AIR-4173)	692-2800 AV 222-2800
	D. F. BURNS	NAEC (92721)	AV 624-7410
	J. J. CONNOR	NAEC (9272)	AV 624-2417
*	CAPT T. P. CANN	NAVAIR (AIR-534)	692-3040
	W. CRANE	NAVAIR (AIR-41732)	692-2800
**	A. J. DiMASCIO	NAVAIR (AIR-534B)	692-3040
	T. R. DRAGO	NAVAIR (AIR-53712)	692-3242
	F. E. EVANS	NAEC (927)	AV 624-2607
	LCDR W. M. GREENWELL	CNAL (532D)	AV 444-3881
	M. CULTNIEKS	NAVAIR (AIR-53443B)	692-3095
	G. A. HOLTON	CNAP (91)	951-5811
	W. KEIL	NAVAIR (AIR-53443)(WTA)	692-3095
	R. E. KNUDSEN	NAEC (92723)	AV 624-7462
	W. HARLER	CNAL (525B)	690-7318
	K. E. NYBOE	NAVAIR (AIR-53443)	692-3094
	T. PIROZEK	NAVAIR (AIR-41712b)	692-2344
	LCDR K. T. REYNOLDS	NAVAIR (AIR-41712)	692-2345
	W. V. ROBERTS	CNAP (7515)	951-6101
	E. D. ROWLEY	ASO (SCW4-105)	697-3578
	ASCS D. L. SEMAT	CNAL (532B24)	690-3688
	H. J. SHECHTEL	NAVAIR (AIR-5344)	692-3094
	H. K. STILLE	NAVAIR (AIR-53443)(VITRO)	692-3096
*	H. T. DECOT	NAVSEA (SEA 6516)	692-8157
	F. HOLDER	NAVAIR (AIR-53443)(VITRO)	692-3096

** Opening session only
* Second day only

Enclosure (1)

ARMAMENT HANDLING/SUPPORT EQUIPMENT CONFERENCE
NAVAL AIR SYSTEMS COMMAND
18-19 February 1976

AGENDA ITEMS

Agenda Item No. 1. (AIRLANT Submitted) Propose that AHE (excluding certain specific non-AIMRL items) be included on one IMRL, maintained/managed by the ~~AIRDEPT~~ AIMD, with sub-custody to the Weapons Department.

Discussion. CNAP (Mr. Roberts) contended that better management reports would be generated by individual activities if the Weapons Department could be made responsible for their required Armament Handling Equipment. The present system often lets the user who loses items of AHE "off the hook" because he doesn't have official custody. This results in management by crises. In addition, there is no way provided within the IMRL system to sub-custody equipment to the G-division or other organizational user.

CNAL expressed the opinion that providing Inventory Control and reporting responsibility to the Weapons Department would split the traditional AIMD IMRL maintenance/management function resulting in serious lack of control. Additionally, the increasing complexity of Inventory Control procedures (e.g., Closed Loop System) would be very difficult for Weapons Department personnel considering the lack of IMRL/3M training. Attendees, in general, concurred with the CNAL position.

Enclosure (2)

NAEC-GSED-115

Action. AIR-41712 was assigned Action Chit No. 1 to study alternatives for different methods of computation of AHE for AIMDs, Weapon Departments, and Organizational Levels (i.e., Squadrons) for shipboard and shorebased application. This new system should not be based purely on aircraft quantities.

Agenda Item No. 2. (AIRLANT submitted) A corollary problem concerns the conflict often arising between the activity having actual custodial responsibility and the prime user. This becomes a problem particularly for stowage/ torage of equipment not in use. Also, in many cases, there are safety considerations such as with the gasoline motor driven HLU-196 Bomb Hoist.

Discussion. The conflict that stems from custodial responsibility and user responsibility results in problems of maintenance, care and safe-keeping when equipment is not in use. Also of immediate concern is the lack of specific stowage provisions for fueled HLU-196/E Bomb Hoists and their fuel supply.

Action. AIR-53712 accepted Action Chit No. 2 to identify to all concerned the ShipAlt proposed to resolve problems concerning HLU-196/E Bomb Hoist and the 55 gal gasoline drum stowage on board ships.

✓ Agenda Item No. 3. (ASO submitted) Discuss possible methods of improving the In-Use-Asset reporting system for AHE End Items.

Discussion. Reporting of AHE end items used by the Fleet units is not performed accurately. The inaccurate reports tend to aggravate the management problem. Staff TYCOMS are not manned to police the eporting system on an item-by-item basis. There are, however, yste improvements established or in process which are designed

to improve in-use asset reports. The Closed Loop subsystem of the AMMRL program encompasses all IMRL listed AHE and is the vehicle through which inventory validity can be attained between activities. The use of additional data processing equipment to enhance activity inventory control via the AMMRL program is currently under review by NAVAIR HQ as a result of the Aviation GSE conference of 21-23 Oct 1975. However, neither Closed Loop, LAMS nor ADP equipment can provide the necessary degree of accuracy if reporting activities' input data is incomplete or erroneous. System discipline is essential and must be maintained throughout the reporting chain. Efforts are underway to improve management reports through obtaining and installing remote terminals. Also, the Local Asset Management Subsystem (LAMS), an optional system for use by IMAs, was developed to provide an automated method for local management of GSE (including AHE).

Action. The best way to improve the situation in the near future is to have AIRPAC and AIRLANT review and purify their cognizant lists for ASO so that better visibility can be attained for future AHE buys. See Action Chit #3.

Agenda Item No. 4. (AIRPAC submitted) Recommend establishment of new list codes for AHE that will provide source data to print a Weapons Department IMRL both afloat and ashore to accomplish the following:

a. Weapons Department IMRL reporting separate from AIMD,
b. Weapons Department vice AIMD funding for NSA IMRL items.

Discussion. A separate IMRL for the weapons department circumvents the management responsibilities intended under the AMMRL program. The present

method of listing the Weapons Department requirements (for AHE) as pre-positioned items on the AIMD IMRL provides for efficient centralized control of the maintenance/management functions in company with the management of a myriad of items of GSE already assigned to the AIMD. This is particularly evident in the area of inventory control.

Action. This matter was not pursued because of the action proposed in Agenda Item Number 1 relative to providing more positive direction (in the NAMP) concerning Weapon Dept/AIMD responsibilities. See Action Chit No. 4.

Agenda Item No. 5. (AIRPAC submitted) Review current "OL" List Codes for proper Pre-positioning Codes and availability, both ashore and afloat. Some items cited for issue to "I" level activities and which have a pre-position code applied appear to be "O" level equipments.

Discussion. Only pre-position code "P" has previously been applied to AHE. Allowances of AHE need to be reviewed for consideration of applying pre-position code "E" or allowing the equipment at "O" level.

Action. AIRPAC accepted Action Chit No. 5 to initiate a review of pre-position codes. This document will be forwarded for final action to NAEC (Code 927) via AIRLANT, CNAVRES and CNATRA.

Agenda Item No. 6. (AIRLANT submitted) Fundamental to the question of maintenance support, and one which affects nearly all other factors, is the determination of maintenance. Are maintenance plans established? What do they direct? Do they cover all equipments? Are MRC decks avail.[illegible], etc.?

Agenda Items - 5

Discussion. Maintenance philosophy for AHE is a critical factor and fundamental to overall maintenance support in the Fleet. However, since AHE is considered to be either CGSE or PGSE, the same maintenance concepts and practices apply; i.e., "O" level maintenance will be performed by the user (usually the AO rating) and "I" level maintenance by the AIMD Work Center 900 by the AS rate. This philosophy will be supported by, but not limited to, the following documentation:

a. Maintenance plans will be prepared for new items of AHE or any existing item of AHE found to have an inadequate support posture, particularly in regard to bit and piece support.

b. MRCs will be prepared on existing major items of equipment not now having these maintenance requirement documents.

c. New major Armament Handling Equipment will have MRCs prepared on the procurement contract.

Action. Slings will be covered by inclusion in NAVAIR 17-1-114 Handbook - "Inspection and Proofload Testing of Lifting Slings." NAVAIR AIR-534 will provide engineering data and AIR-417 will amend manual. See Action Chit No. 6.

Agenda Item No. 7. (AIRLANT/AIRPAC submitted) There are obvious conflicts as to which rates (AO's or AS's) should be assigned various maintenance tasks. Rating Scopes and Occupational Standards in the AO/AS ratings are unclear and misleading, especially when matching inherent capabilities/ potential against past performance. Maintenance tasks are not assigned commensurate with functional responsibility. Manpower allocations do not accurately reflect the increased workload imposed, especially on the AS rate.

Discussion. OPNAVINST 4790.2A (Naval Aviation Maintenance Program) needs to be reviewed for adequate guidelines pertinent to Armament Handling Equipment maintenance requirements.

General policy to be documented is that "O" level maintenance tasks will be performed by the user, "I" level by the AIMD GSE Work Center (900). Under existing management directives, it is implied that AHE is supported as Common Ground Support Equipment (CGSE). (Organizational Level Work Center 330 and Intermediate Level Work Center 900.) However, in practice, the user of AHE has endeavored to provide all organizational level maintenance support and the bulk of the intermediate level support (using AO rates and skills). This has resulted in a degradation in the equipment due to the lack of adequate facilities, equipage and training of personnel to support the AHE.

Action. AIR-4173 was assigned Action Chit No. 7 to prepare a revision to OPNAVINST 4790.2A, Volume II, Chapters 2 and 14, to clarify policy on performance of AHE maintenance.

Agenda Item No. 8. (AIRLANT submitted) Requirements for specific training need examination.

Discussion. It was noted that AHE was becoming more complex and, at times, more than a challenge to the available personnel capabilities. The actual requirements of the Fleet are imprecisely defined so that it is difficult to determine what specialized training should be made available in Class "A" schools or the NAVTRADETS.

Action. The Fleet was requested to submit specific requirements to be handled on a case-by-case basis through routine channels. See Action Chit #8.

Agenda Items - 7

Agenda Item No. 9. (AIRLANT submitted) Procedures delineating specific responsibilities by maintenance level need expansion and clarification. The inconsistencies relating to Weight Testing and/or Certification of various equipment is an example.

Discussion. Conflicting documentation results in redundance of testing AHE at the AIMDs and NARFs. When this happens, it results in a drain of funds which are critically needed elsewhere. Guidance for Weight Testing/Certification for AHE can now be found in several official documents, such as: OP 3347, OP 4, OP 5, SWOP H-1, NAVORD 44941, NAVAIR 17-1-114, and MRC DECKS.

A letter has been forwarded to NAVSEASYSCOM to clarify Testing/Certification of lifting devices (e.g., slings, etc.), but at the present time each Command has its own requirements which usually have to be met through NARF facilities. GSE rework funds have supported this effort in the past, but the cognizant Command should supply funds to support their equipment (i.e., NAVSUP should fund test/certification requirements for the Raymond Reach Fork Truck used in magazines aboard CVs). NAVSEA (Code 6516) advised that all testing/certification of NAVSEA equipment could be accomplished at no cost to Fleet units at NWS Earle, NJ or NWS Concord, CA, Fleet Service Departments. Custodians of the AHE would have to arrange for shipping. AIRLANT/AIRPAC would like to see one publication made the official Testing/Certification guide for Fleet use.

Action. AIR-53443B/NAEC (927) accepted Action Chit No. 9A to establish an RDT&E program to develop specialized periodic weight testing equipment. AIR-534/417 accepted Action Chit No. 9B to assure that SWOP H-1 reflects the appropriate MRC test requirement.

Agenda Items - 8

Agenda Item No. 10. (AIRLANT submitted) A serious deficiency exists in 3M Documentation of "O" and "I" level maintenance actions. The responsibility which the Weapons Department has as principal "O" level user for performing required scheduled/unscheduled maintenance and accompanying documentation is not enforced.

Discussion. OPNAVINST 4790.2A does not include reporting by Weapons Department personnel for GSE items in the required Maintenance Action Reporting system. It is necessary to institute this requirement for the principal "O" level activities (i.e., Weapons Department) to enforce reporting of required scheduled/unscheduled maintenance actions.

Action. AIR-4173 is assigned Action Chit No.10 to revise Chapter 3, Volume III, of OPNAVINST 4790.2A to correct the above deficiency.

Agenda Item No. 11. (AIRLANT submitted) Supply Support/Funding responsibility for AHE needs to be clarified.

Central to this problem is a determination of what actions undertaken in regard to the AVCAL/COSAL interface program, directed by Joint NAVSUP/NAVAIR 412 ltr NAVSUP 04312A of 24 July 1972, have been completed. Areas requiring identification or clarification where ambiguities apparently still exist are:

a. Initial procurement responsibilities.
b. Cognizant ICPs, responsibility for consumables/repairables, etc.
c. Depot level repairs, certification and/or calibration where appropriate.
d. Funding.
e. Guidance in determining range/depth of equipment required to support Rapid Rearm Concept.

Discussion. The interface program dealing with AVCAL/COSAL actions has come to an impasse. The areas of interest cited above still need to be clarified. It was noted that guidance and/or clarification of AHE GSE quantities to support the Improved Rearming Rate Program were needed by

management personnel. The group was advised by NAEC that this information had been entered into the latest source data documentation. Further identification of the expected impact of the above cited problem elements on Fleet operations is required before this matter can be considered.

Action. CNAL was requested to submit amplifying information/data to identify specific problems for NAVAIR consideration. See Action Chit No. 11.

Agenda Item No. 12. (AIRPAC submitted) Review necessary changes to OPNAV 4790.2A to ensure that proper listings of equipments are reflected to ensure that AIMD is designated to "I" level maintenance cog. Current maintenance practices are not clearly defined in OPNAVINST 4790.2A and no 3M data is collected.

Action. See Agenda Item No. 10 and Action Chit No. 12.

Agenda Item No. 13. (AIRPAC submitted) Review current listings of directives for conflicting instructions (e.g., weight testing limits/frequency).

Action. See Agenda Item No. 9 and Action Chit No. 13.

Agenda Item No. 14. (ASO submitted) Discuss future procurement of the following equipment:

a. Linkless Ammo Loading System (LALS)
b. MHK-128 Munitions Transporter
c. MHU-126/M Small Munitions Transporter
d. HLU-196/B/E Bomb Hoist

Discussion: a. LALS scheduled procurement will meet the AIRLANT/AIRPAC requirements through FY-78 by 1 July 1976. This equipment has been controlled by AVNMATOLANT, Norfolk, VA and has resulted in distribution problems for AIRPAC since they have not as yet put LALS material under AMO control. It was recommended by the conferees that AIRPAC take action similar to AIRLANT to balance the distribution of critical assets.

b. MHK-128 Munitions Transporter procurement will be limited to the 250 units procured by support of the low profile F-4 aircraft. Additional multiple weapon adapters will be procured to meet Fleet requirements.

c. MHU-126/M Small Munitions Trailer procurement is as follows:

174 each for U.S. Navy (14 each for USMC)
26 each for FMS

d. MHU-196/B/E Bomb Hoist - 370 each have been procured. An additional 50 units will be acquired in the near future.

Action. See Action Chit No. 14.

Agenda Item No. 15. (ASO submitted) Clarification of all recent adapter application/allowance changes.

Action. See Agenda Item No. 1 and Action Chit No. 15.

*Item 16. External power sources for LALS.

Discussion. The necessity for external power sources for the Linkless Ammunition Loading System and the F-14 Weapons Rail with the introduction of the F-14 and the A-7E was discussed. The external drive provided as PGSE for the F-14 is pneumatic; NAVAIR, therefore, proposed a pneumatic power source for the A-7E LALS. The TYCOMS have complained about the use of pneumatics. An electric powered wrench, which is what the TYCOMS desire, is presently under evaluation at NATC, Patuxent River.

Action. AIR-534 will keep all concerned advised as to the results of the evaluation of the electric gun. See Action Chit No. 16.

*Item 17. AERO 67A Small Bomb and Missile Adapter.

Discussion. The AERO 67A Small Bomb and Missile Adapter was initially developed

* Additional items added at Conference.

Agenda Items - 11

by NADC and procured by ASO as a transporter/loader. The loading unit developed a reputation for being unreliable due to inadvertant dropping of stores. During an investigative period, the loading hardware was eliminated from the buy package and only the transport unit was bought to fulfill the shipboard handling requirement. Recently, NAEC has solved the design deficiency that has plagued the loading section of the AERO 67A Adapter and has updated the procurement package so that all future buys will include the combined transporter/loader hardware as originally intended.

Action. NAEC will ensure that, henceforth, the AERO 67A Small Bomb and Missile Adapter will be issued as one unit with one NSN. See Action Chit No. 17.

NAEC-GSED-115

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: NEED TO IMPROVE ADAPTABILITY OF AIRCRAFT ORIENTED ADMRL PROGRAM TO WEAPON ORIENTED GSE

BACKGROUND

The present method of AHE allowance computation is based on the standard ADMRL 10-column spread (# of aircraft). This procedure has serious deficiencies since AHE requirements are frequently unrelated to the number of aircraft supported. The consequences of unrealistic allowances include procurement problems, excessive Aircraft Controlling Custodian (ACC) tailoring efforts, etc.

PROPOSED SOLUTION

NAVAIR 417 will review the present ADMRL AHE allowance computation method, ashore and afloat, with the objective of determining if an alternative method is feasible.

SUBMITTED BY: AIRLANT

ASSIGNED TO: AIR-41712

DUE DATE: 1 Sept 1976

CHIT NO: 1

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: NEED TO DEVELOP PROVISIONS FOR STOWAGE/STORAGE HLU-196 HOIST AND GASOLINE (IN BULK CONTAINERS)

BACKGROUND

In the interest of safety, virtually all items of GSE have adopted the diesel engine as a self-contained power source (with the capability to use jet fuels when diesel fuel is not available). The HLU-196, with its extreme light weight, cannot convert to a diesel engine without a sacrifice to the existing utility value.

PROPOSED SOLUTION

Identify the appropriate ShipAlt to Fleet for resolving problems of stowage on board ship of HLU-196 Bomb Hoist and gasoline supplies. NAVSEC (Code 6161) is preparing backup data for NAVSEA Type Desk action.

SUBMITTED BY: AIRLANT

ASSIGNED TO: T. R. DRAGO (AIR-53712)

DUE DATE: Closed

CHIT NO: 2

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: DISCUSS POSSIBLE METHODS OF IMPROVING IN-USE-ASSET REPORTING SYSTEM FOR AHE

BACKGROUND:

Accurate reporting of AHE end items by Fleet units is not performed.

PROPOSED SOLUTION:

By separate action, efforts (including Closed Loop and LAMS) are underway to improve the management and reporting for all GSE. This agenda item closed for record purposes.

SUBMITTED BY:	ASO
ASSIGNED TO:	NONE
DUE DATE:	NONE
CHIT NO:	3

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: ESTABLISH NEW ADMRL "OL" LIST CODES TO PROVIDE WEAPONS DEPARTMENT WITH SEPARATE ADMRL FOR AHE

BACKGROUND

Existing "OL" list codes under the ADMRL provide allowances of AHE to the Ground Support Equipment Division of the AIMD with the implication that activity is totally responsible for the allowed items. Since the AIMD is aircraft oriented, the allowances and management of equipments does not necessarily meet the needs of the Weapons Department.

PROPOSED SOLUTION

Management within the existing ADMRL program is being improved (see Agenda Items 1 and 5). No further action on this matter in favor of the other actions proposed within the framework of existing ADMRL program.

SUBMITTED BY: CNAP

ASSIGNED TO: AIR-41732

DUE DATE: N/A

CHIT NO: 4

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: REVIEW "OL" LIST CODES FOR AHE AND PRE-POSITIONING CODES FOR APPLICABILITY

BACKGROUND

"OL" list codes with attendant application to aircraft create difficulties in management of resources. Also, pre-positioning codes can reduce inventory requirements/objectives if judiciously applied.

PROPOSED SOLUTION: CNAP will conduct basic "OL" list review and provide results of review to all concerned for comments/concurrence. "Potential delete" items identification are to be included during review. This review should be forwarded to NAEC for final disposition via AIRLANT, CNAVRES and CNATRA.

SUBMITTED BY: CNAP

ASSIGNED TO: CNAP

DUE DATE: 30 April 1976

CHIT NO: 5

Enclosure (3)

Ser 592D/723781
7 June 1976

Distribution: (Cont'd)
SNDL FT2 (Chief of Naval Air Training)
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Copy to:
Commanding Officer
Naval Air Facility
El Centro, California
92243

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: MAINTENANCE REQUIREMENTS DOCUMENTATION NEEDED FOR AHE

BACKGROUND:

Major items of equipment (AHE) already have MRCs. Equipment such as handling slings are not now covered. A previous decision (based on a conference in October 1975) indicated that AHE slings should be added to the NAVAIR Handbook 17-1-114 - "Inspection and Proofload Testing of Lifting Slings."

PROPOSED SOLUTION:

NAVAIR budget and fund the following effort:

* a. - Acquire engineering data on slings to be used as basis for preparing Manual update

b. - Prepare Manual revision

* Note: NAEC needs 59K to do this task. It has been made a line item in FY-77 budget.

SUBMITTED BY:	AIRLANT
ASSIGNED TO:	NAEC
DUE DATE:	FY-77
CHIT NO:	6

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: REQUIREMENTS FOR SPECIFIC TRAINING NEED EXAMINATION

BACKGROUND:

AHE becoming increasingly complex, requiring a greater degree of training for involved personnel.

PROPOSED SOLUTION:

Specific information is required before this can be accepted for action. Fleet advised to submit requirements/comments on individual items of AHE. Closed for record purposes.

SUBMITTED BY: ATRIANT

ASSIGNED TO: NONE

DUE DATE: NONE

CHIT NO: 8

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: WEIGHT TESTING OF ARMAMENT HANDLING EQUIPMENT

BACKGROUND: The Fleet requires specialized test equipment and related test procedures to support the conduct of the periodic weight testing program required for Armament Handling Equipment. The aviation ordnance personnel aboard CV/CVN. type ships and at related shore activities have been experiencing difficulties in fully complying with the requirements of the periodic test program for explosive handling devices due to a lack of a test stand and appropriate test procedures. Further, current policy requires delivery of all equipment that needs testing to the nearest Naval Air Rework Facility. This procedure is expensive and time consuming and further contributes to the series of adverse conditions that impact on safety and reliability of Armament Handling Equipment.

PROPOSED SOLUTION: Recommend that RDT&E CAT 6.4 funding be made available to design and develop a specialized testing fixture capable of testing Armament Handling Equipment (slings, strongbacks, hands, beams, etc.) in accordance with current safety requirements. Capacity of the test fixture shall be adequate to test all handling equipment in the configuration they are used. The design will include all necessary adapters, instrumentation, operating instructions, and safety devices. After completion of prototype and appropriate Fleet evaluation, procure the test fixture for the AIMD at the following activities: NAS Alameda, NAS North Island, NAS Cubi Point, FWC Yokosuka, NAS Jacksonville, NAS Norfolk and NAF Sigonella.

SUBMITTED BY:	AIRLANT/AIRPAC
ASSIGNED TO:	AIR-53443B
DUE DATE:	15 June 1976
CHIT NO:	9A

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: NEED TO IDENTIFY MAINTENANCE RESPONSIBILITIES FOR ARMAMENT HANDLING EQUIPMENT IN OPNAVINST 4790.2A, NAMP

BACKGROUND:

Volume II of the NAMP defines maintenance responsibilities for CGSE and armament items, but does not specifically identify AHE.

PROPOSED SOLUTION: Prepare revision to NAMP (Vol. II, Chapter 2) to include responsibilities ("O" and "I"). Revision to include requirements for maintenance data reporting at "O" Level.

SUBMITTED BY: CNAL/CHAP

ASSIGNED TO: NAVAIR 4173

DUE DATE: 30 June 1978

CHIT NO: 7

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: WEIGHT TESTING - DIRECTIVE INCONSISTENCY

BACKGROUND: Inconsistencies in weight testing procedures between MRC periodic test requirements and SWAP-III.

PROPOSED SOLUTION: Provide one directive for NAVAIR equipment that will include requirements of SWAP-III or assure that SWAP-III references the current MRC/Sling Manual 17-1-114 requirement.

SUBMITTED BY:	AIRLANT
ASSIGNED TO:	AIR-53443B
DUE DATE:	30 June 76
CHIT NO:	9B

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: DEFICIENCY EXISTS IN GUIDANCE FOR REPORTING MAINTENANCE ACTIONS

BACKGROUND:

OPNAVINST 4790.2A, NAMP does not clearly state requirements for reporting maintenance actions when performed by the user who is not necessarily maintenance oriented.

PROPOSED SOLUTION:

Prepare revision to OPNAVINST 4790.2A requiring AOs to prepare and submit MAFs re: AIE organizational level maintenance.

SUBMITTED BY: AIRLANT

ASSIGNED TO: AIR-4173

DUE DATE: ASAP (See Action Chit No. 7)

CHIT NO: 10

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: SUPPLY SUPPORT/FUNDING RESPONSIBILITIES REQUIRE IDENTIFICATION OR CLARIFICATION OF AVCAL/COSAL INTERFACE PROGRAM

BACKGROUND:

Ambiguities exist in the following areas:

a. Initial procurement responsibilities.
b. Cognizant ICPs, responsibility for consumables/repairables, etc.
c. Depot level repairs, certification and/or calibration where appropriate.
d. Funding.
e. Guidance in determining range/depth of equipment required to support Rapid Rearm Concept.

PROPOSED SOLUTION:

This matter not adequately considered. However, Items a. through d. relate to internal NAVAIR procedures and have little impact on Fleet operations. Item e. is a routine matter of allowances recommendations. No further action expected. NAVAIR will respond to individual requests for specifics regarding generalities outlined above. Closed for record purposes.

SUBMITTED BY:	CNAL
ASSIGNED TO:	COGNIZANT NAVAIR CODE ON CASE BASIS
DUE DATE:	N/A
CHIT NO:	11

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: IDENTIFICATION REQUIRED IN OPNAVINST 4790.2A RELATING TO MAINTENANCE MANAGEMENT & MAINTENANCE DATA AHE REPORTING

BACKGROUND:

This matter previously discussed in Agenda Items 7 and 10.

PROPOSED SOLUTION:

This Action Chit closed for record purposes.
Action cited in Action Chits 7 and 10.

SUBMITTED BY: CNAP

ASSIGNED TO: AIR-41732

DUE DATE: N/A

CHIT NO: 12

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: CONFLICTING INSTRUCTIONS (e.g. weight testing limits/frequency)

BACKGROUND:

This subject was covered by the discussions under agenda item number 9. This was an AIRPAC item; item number 9 was AIRLANT. The discussions resulting from agenda items 9 and 13 were limited to the testing and certification of AHE.

PROPOSED SOLUTION:

Action Chits 9A and 9B were assigned to rectify problems cited by agenda items 9 and 13.

This chit is closed for record purposes.

SUBMITTED BY: AIRPAC

ASSIGNED TO: AIR-53443

DUE DATE: N/A

CHIT NO: 13

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: FUTURE PROCUREMENTS OF AHE

BACKGROUND:

ASO requested plans for future procurement of the following:

a. Linkless Ammo Loading System (LALS)
b. MHK-128 Munitions Transporter
c. MHU-126/M Small Munitions Transporter
d. HLU-196/E Bomb Hoist

PROPOSED SOLUTION: These equipments are ASO cognizance items. Future procurements will be as follows:

a. LALS - current procurements will meet requirements through FY-78.
b. MHK-128 - only as dictated by Fleet orders to ASO.
c. MHU-126/M - only as dictated by Fleet orders to ASO.
d. HLU-196/E - only as dictated by Fleet orders to ASO.

SUBMITTED BY: ASO

ASSIGNED TO: AIR-53443

DUE DATE: N/A

CHIT NO: 14

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: CLARIFICATION OF ALL RECENT ADAPTER APPLICATION/ALLOWANCE CHANGES

BACKGROUND:

This agenda item previously covered.

See agenda item no. 1.

PROPOSED SOLUTION:

No further action required.

SUBMITTED BY: ASO

ASSIGNED TO: NONE

DUE DATE: NONE

CHIT NO: 15

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: POWERED WRENCH FOR F-14 AND A-7 LALS

BACKGROUND:

The F-14 and A-7 aircraft have a 20MM Linkless Ammunition Loading System (LALS) that requires an external power source to load/unload 20MM rounds. A manual speed wrench is available to do this job but it is not practical when hundreds of rounds are involved because it is a tedious and exhausting operation. A powered wrench is the only practical solution for this task. Low pressure air, electric and gasoline engine power sources have been considered and prototypes of each have been evaluated. The LALS has a requirement for relatively high torque at low RPM and should be capable of loading 20MM ammunition at 400 rounds per minute. The TYCOMs have gone on record for an electric (28 VDC) system over all others.

PROPOSED SOLUTION:

CNAP has submitted two prototype 28 VDC powered wrenches for evaluation. If the electric powered wrench proves out satisfactory and is capable of servicing A-7 and F-14 LALS and F-14 weapons rail, it will be acquired for fleet support.

SUBMITTED BY: CNAL/CNAP

ASSIGNED TO: AIR-53443

DUE DATE: 1 July 1976

CHIT NO: 16

Enclosure (3)

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: AERO 67A SMALL BOMB AND MISSILE ADAPTER NSN ASSIGNMENT

BACKGROUND:

The component parts of the subject adapter are assigned individual NSNs for procurement and requisitioning purposes. This was done because the loading components had defective parts and they were temporarily eliminated from the procurement package.

PROPOSED SOLUTION:

The loading components have been made reliable for AIIE handling and have been placed back in the buy package. A NSN for the complete Adapter Assembly is as follows: 6RX-1730-00-832-8562-SX.

SUBMITTED BY: CONFERENCE CHAIRMAN

ASSIGNED TO: NAEC

DUE DATE: CLOSED

CHIT NO: 17

Enclosure (3)

ACTION CHIT SUMMARY SHEET

Item No.	Status		Report Encl.		Action Req. by	
	Open	Closed	Yes	No	NAVAIR	Other
1	X		X		41712	
2		X	X		53712	
3		X	X			
4						
5	X		X			CNAP
6	X		X		53443	
7	X		X		417	
8*	X		X			CNAL/CNAP
9A	X		X		53443B	
9B	X		X		53443B	
10	X		X		4173	
11		X	X			
12		X	X			
13		X	X		53443B	
14		X	X		53443	
15		X	X		53443	
16	X		X		53443	
17		X	X			NAEC

* Action will be generated on a case basis.

APPENDIX O - NAVAL SPEEDLETTER, 92721/142:WG:MG 13800, DTD 30 JUL 1976

NAF -GSED-115

OPT (Rev. 7/73)

Naval Speedletter

ONLY

DO NOT CLEAR THROUGH COMMUNICATIONS OFFICE

CLASSIFICATION: UNCLASSIFIED

DATE: 2? JUL 1976

IN REPLY REFER TO: 92721/142:WC:mg 13800

INSTRUCTIONS 92721

1. Message type phraseology is permissible. 9272
2. Both addresses must be appropriate for window envelope or bulk mailing, as intended. Use attention codes, when known. Use dots and ... as guides for window envelope addresses. 9272s
3. Give priority to processing, routing, and ... required. Avoid time-consuming controls. 927s
4. In order to speed processing, a ... special window envelope, ... Speedletter envelope, is provided for ... speedletters where bulk mailing is not used. Other window envelopes also may be used. In bulk mail, speedletters should be placed on top of regular correspondence. 927

TO:

Commanding Officer
Aviation Supply Office (Code ACD4-A)
700 Robbins Avenue
Philadelphia, PA 19111

Subj: Establishment of Additional OL100 Series List Codes for Missile GSE/Armament Handling Equipment; request for

Ref: (a) Peculiar and Common GSE List codes and Standard Allowance Symbols in the ADMRL Program Application Guide

Encl: (1) List of Applicable Additions to OL100 Series List Codes with Aircraft Applications

1. The OL100 Series List Codes which identify Armament Ground Support Equipment (GSE) for various air-launched missile systems currently do not include list codes for Standard Arm AGM-78, Harpoon AGM-84, Condor AIM-53, Phoenix AIM-54, Harm AGM-88, and Target Missile AQM-37A.

2. It is requested that applicable additions, forwarded as enclosure (1), herewith, be incorporated into the next change to the PCSE/CGSE List Code and Standard Allowance Symbols Document.

Encl

BEST AVAILABLE COPY

F. E. EVANS
BY Direction

COPY TO:

NAVAIR (AIR-41722) (AIR-53443)

9274 9273 4

Blind Copies to: 9272s, 927s, 92s
Central Files (3)
92721 (2)

ORIGINATOR: W. [redacted]
DATE TYPED: 27 JUL 76

FROM:

Commanding Officer
Naval Air Engineering Center
Lakehurst, NJ 08733

ADDRESS REPLY AS SHOWN AT LEFT, OR, REPLY HEREON AND RETURN

CLASSIFICATION: UNCLASSIFIED

LIST OF APPLICABLE ADDITIONS TO OL100 SERIES LIST CODES WITH AIRCRAFT APPLICATIONS

OL108-0	NAVY WEAPONS DEPT. MISSILE SHOP-O LEVEL	AGM-78 STANDARD ARM	A-6
OL109-0	H-MS " " " " -I LEVEL	AGM-78 STANDARD ARM	A-6
OL110-0	NAVY " " " " -O LEVEL	AGM-84 HARPOON	P-3
OL111-0	H-MS " " " " -I LEVEL	AGM-84 HARPOON	NONE ASSIGNED
OL120-0	NAVY " " " " -O LEVEL	AIM-53 CONDOR	A-6
OL121-0	H-MS " " " " -I LEVEL	AIM-53 CONDOR	A-6
OL122-0	NAVY " " " " -O LEVEL	AIM-54 PHOENIX	F-14
OL123-0	H-MS " " " " -I LEVEL	AIM-54 PHOENIX	F-14
OL126-0	NAVY " " " " -O LEVEL	AGM-88 HARM	NONE ASSIGNED
OL127-0	H-MS " " " " -I LEVEL	AGM-88 HARM	NONE ASSIGNED
OL128-0	NAVY " " " " -O LEVEL	MK-82/83 BOMBS, CBU, ZUNI, ETC	
OL129-0	H-MS " " " " I LEVEL	MK-82/83 BOMBS, CBU, ZUNI, ETC	
		TORPEDOS	
		MINES	

X. GLOSSARY OF TERMS

1. Armament Handling Equipment (AHE): NAVAIR cognizant equipment specifically dedicated to aviation armament handling operations including stowage, assembly, transfer, and aircraft loading/downloading.

2. Armament Support Equipment (ASE): NAVAIR cognizant equipment used for airborne weapons evolutions ranging from delivery from prime manufacturer to loading aboard the aircraft. Includes Armament Handling Equipment and Assembly, Tools, Packaging Equipment and Containers, and Testing/Checkout Equipment.

3. Materials Handling Equipment (MHE): Includes all general purpose equipment approved for weapons and explosive ordnance handling and transportation coming under the command cognizance of NAVSEA.

4. Ordnance Handling Equipment (OHE): NAVSEA cognizant equipment specifically dedicated to surface and sub-surface ordnance handling operations including stowage, assembly, transfer, and loading/strikedown aboard the vessel.

5. Ordnance Handling Vehicles (OHV): Includes all automotive trucks, vans, and other over-the-road vehicles approved for weapons and explosion ordnance transportation concerning under the command cognizance of NAVFAC.

6. Packaging Equipment: Equipment used to protect weapons, explosive ordnance, and weapons components during shipment.

7. Testing Equipment: Equipment required to ascertain function, readiness, and reliability of weapons and weapon components.

8. Weapons Handling Equipment (WHE): Includes all equipment used for handling and transporting weapons inclusion of NAVAIR, NAVSEA, NAVSUP, and NAVFAC equipments.

9. Weapons Support Equipment (WSE): NAVSEA cognizant equipment used for surface and sub-surface ship weapons evolutions ranging from delivery from prime manufacturers to loading aboard the vessel. Includes Ordnance Handling Equipment and Assembly Tools, Packaging Equipment and Containers, and Testing Equipment.

XI. LIST of ABBREVIATIONS, ACRONYMS, and SYMBOLS

AA - Airman Apprentice
AAW - Anti-Aircraft Warfare
A/C - Aircraft
ACC - Aircraft Controlling Custodians
ADMRL - Application Data Material Readiness List
AE - Ammunition Ship
AEL - Allowance Equippage List
AGSE - Armament Ground Support Equipment
AHE - Armament Handling Equipment
AIMD - Aviation Intermediate Maintenance Department
AMHAZ - Ammunition Hazards Board
AMMRL - Aviation Maintenance Materials Readiness List
AN - Airman
AO - Aviation Ordnanceman
AOE - Fast Combat Support Ship
AS - Aviation Support Equipment Technician; Submarine Tender
ASO - Aviation Supply Office
AVCAL - Aviation Consolidated Allowance List
AWM - Awaiting Maintenance
AWP - Awaiting Parts

BPDMS - Basic Point Defense Missile System
BUORD - Bureau of Naval Ordnance (obsolete)
BUWEPS - Bureau of Naval Weapons (obsolete)

CFA - Cognizant Field Activity
CGSE - Common Ground Support Equipment
COMSERVLANT - Commander, Service Forces, Atlantic
COMNAVAIRLANT - Commander, Naval Air Forces, Atlantic
COMNAVAIRPAC - Commander, Naval Air Forces, Pacific
CNO - Chief of Naval Operations
CORAL - Consolidated Ordnance Requirements Allowance List
COSAL - Consolidated Ordnance Shipboard/Shore Base Allowance List
CV - Aircraft Carrier

FIUL - Fleet Issue Unit Loads

GM - Gunner's Mate
GSERD - Ground Support Equipment Requirements Data

ICP - Inventory Control Point
ILSP - Integrated Logistic Support Plan
IMRL - Individual Material Readiness List
IRRP - Improved Rearming Rate Program

MHE - Material Handling Equipment
MIP - Maintenance Index Page
MM - Machinist Mate
MRC - Maintenance Requirement Card

NAD = Naval Ammunition Depot
NAEC/GSED = Naval Air engineering Center/Ground Support Equipment Department
NAMP = Naval Aviation Maintenance Program
NAS = Naval Air Station
NAEC = Naval Air Engineering Center
NAVAIR (also NAVAIRSYSCOM) = Naval Air Systems Command
NAVAIRSYSCOMREPLANT = Naval Air Systems Command Representative, Atlantic
NAVAIRSYSCOMREPPAC = Naval Air Systems Command Representative, Pacific
NAVFAC = Naval Facilities Engineering Command
NAVSAFCEN = Naval Safety Center
NAVSEA (also NAVSEASYSCOM) = Naval Sea Systems Command
NAVSEASUPCENLANT = Naval Sea Support Center, Atlantic
NAVSEASUPCENPAC = Naval Sea Support Center, Pacific
NAVSUP = Naval Supply Systems Command
NAWF = Naval Air Weapons Facility
NTPI = Naval Technical Proficiency Inspection

OHE = Ordnance Handling Equipment

PGSE = Peculiar Ground Support Equipment
PMA = Project Manager for Air
PMS = Planned Maintenance System
PWD = Public Works Department

RFI = Ready for Issue

SHOLS = Single Hoist Ordnance Loading System
SPCC = Ships Parts Control Center
SWOP = Special Weapons Operational Procedures

TAD = Temporary Additional Duty
TM = Tradesman
TYCOM = Type Command(er)

WC = Work code; work center

3-M = Maintenance and Material Management

ACTION CHIT

ARMAMENT HANDLING/SUPPORT EQUIPMENT

CONFERENCE

18 - 19 FEBRUARY 1976

SUBJECT/PROBLEM: REQUIREMENTS FOR SPECIFIC TRAINING NEED EXAMINATION

BACKGROUND:

AHE becoming increasingly complex, requiring a greater degree of training for involved personnel.

PROPOSED SOLUTION:

Specific information is required before this can be accepted for action. Fleet advised to submit requirements/comments on individual items of AHE. Closed for record purposes.

SUBMITTED BY: AIRLANT

ASSIGNED TO: NONE

DUE DATE: NONE

CHIT NO: 8

Enclosure (3)